T+A

USER MANUAL

Caruso

Software Version V 1.3 / 2.3

Bestellnummer / Order No. 9103-0386

Welcome.

We are delighted that you have decided to purchase a T+A product. With your new *Caruso* you have acquired a top-quality piece of equipment which has been designed and developed with the wishes of the audiophile music lover as absolute top priority.

This system represents our very best efforts at designing practical electronic equipment incorporating solid quality, user-friendly operation and a specification and performance which leaves nothing to be desired.

All these factors contribute to a piece of equipment which will satisfy your highest demands and your most searching requirements for a period of many years. All the components we use meet the German and European safety norms and standards which are currently valid. All the materials we use are subject to painstaking quality monitoring.

At all stages of production we avoid the use of substances which are environmentally unsound or potentially hazardous to health, such as chlorine-based cleaning agents and CFCs.

We also aim to avoid the use of plastics in general, and PVC in particular, in the design of our products. Instead we rely upon metals and other non-hazardous materials; metal components are ideal for recycling, and also provide effective electrical screening.

Our robust all-metal cases exclude any possibility of external sources of interference affecting the quality of reproduction. From the opposite point of view our products' electro-magnetic radiation (electro-smog) is reduced to an absolute minimum by the outstandingly effective screening provided by the metal case.

Our range of accessories includes high-quality cables and connectors

We would like to take this opportunity to thank you for the faith you have shown in our company by purchasing this product, and wish you many hours of enjoyment and sheer listening pleasure with your *Caruso*.

T+A elektroakustik GmbH & Co KG

CE All the components we use meet the European safety norms and standards which are currently valid. The operation instructions, the connection guidance and the safety notes are for your own good - please read them carefully and observe them at all times.

This product complies with the Low Voltage Directive (73/23/EEC), EMV Directives (89/336/EEC, 92/31/EEC) and CE Marking Directive (93/68/EEC).

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About these instructions

All the controls and functions of the *Caruso* which are frequently used are described in the first section of these operating instructions.

The second part - **'Basic settings, Installation, Using the system for the first time'** covers connections and settings which are very seldom required; they are generally required only when the machine is set up and used for the first time. Here you will also find a detailed description of the network settings required for connecting the *Caruso* to your home network.

For newcomers to networks we have prepared explanations of some of the important terms used in this technology and other background information in the Chapter **'Network Terminology'**.

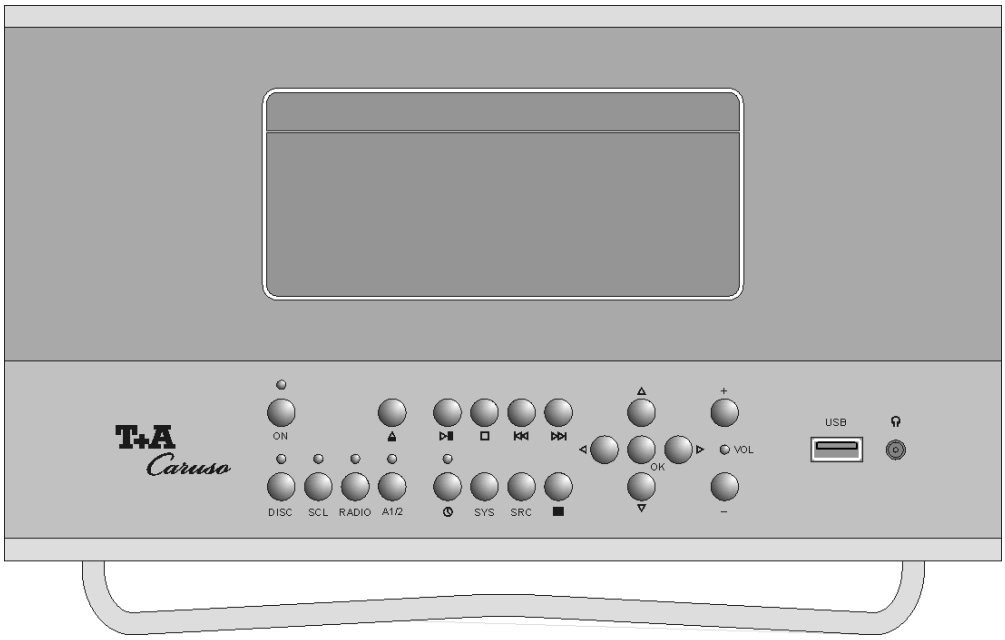
Symbols used in these instructions

Caution!

Text passages marked with this symbol contain important information which must be observed if the machine is to operate safely and without problems.

This symbol marks text passages which provide supplementary notes and background information; they are intended to help the user understand how to get the best out of the machine.

Caruso Multi-Source System



The Controls

All the important functions of the *Caruso* can be operated using the buttons on the front panel of the machine. Direct-access buttons are provided for the essential functions such as source select and track select, whereas less frequently required functions are controlled by means of menus which are called up using the SRC / SYS button.

All information regarding the status of the machine, the current track and the tuned station are displayed on the integral screen. The main information is highlighted on-screen according to context, and can be viewed clearly from some distance. The fol-lowing section provides a more detailed explanation of the functions of the front panel buttons and the screen information.

ON

(**On and Off switch**)
A brief press on the ON button switches the machine on and off. When it is switched on, the LED above the button glows green.

ⓘ Mains switch in the mains socket (back panel)
To use the *Caruso* the mains switch on the back panel (in the mains socket) must be set to the '1' position.

⚠ **Caution!**
The mains switch is not an isolation switch, i.e. parts of the machine are still connected to the mains even when the green LED is off. If you know you will not use the system for a long period, operate the mains switch in the mains socket in order to disconnect it from the mains supply.

Source select

DISC	Selects the disc player of the *Caruso*
SCL	Selects the Streaming Client function of the *Caruso* ,(Internet Radio, access to music servers) and / or the iPod (you may have to press several times).
RADIO	Selects the VHF FM radio of the *Caruso*
A1/2	Toggles between analogue inputs 1 and 2.

Timer

⏲

Brief press: opens the alarm timer menu (see Chapter **'Alarm Timer'**)
While the LED above the ⏲ button is flashing:
Long press: Switches alarm function off
After an hour the machine **does not switch off automatically**

Menu functions

SYS	Brief press:	Opens the **'System Configuration' menu** (see Chapter **'System Settings (System Configuration menu) '**)
SRC	While the Streaming Client Function is selected:	
	Brief press:	Opens the **'Source Select'** menu, in which you can select the desired listening source
	Long press:	Opens the **'Network Settings'** menu (see Chapter **'Network Configuration'**)
☰	Displays the Favourites List stored on the *Caruso* (see Chapter **'Operating the Radio, Favourites List'** and **'Operating the Streaming Client, Access to media content via the Favourites List'**)	

Mechanism functions

⏏	Button for opening and closing the CD drawer
▶II	Starts playback / halts playback (pause) / resumes after a pause
■	Ends playback
⏮	Fast forward / rewind, to locate a particular passage. Hold the search button pressed in to increase the search speed.
⏭	Fast forward / rewind, to locate a particular passage. Hold the search button pressed in to increase the search speed.

Select buttons

	Navigation
◀	Returns to previous point / change button
▶	Confirms input / change button
▼	Selects the next point within a list / select button
▲	Selects the previous point within a list / select button
OK	Confirm button / start playback / halt playback (pause) / resume after a pause
VOL + / VOL -	Increases / reduces volume
LED (between the buttons)	The LED flashes when the loudspeakers are switched off (Muting). The LED glows continuously if the Protection circuit has switched the machine off, e.g. due to overloading / overheating. If this should happen, please switch the machine off using the mains switch (in the mains socket on the back panel), and leave it for about five minutes. When the machine has cooled down, it should work normally once switched on again. If this action does not cure the problem, please contact your **T+A** dealer.

Connections

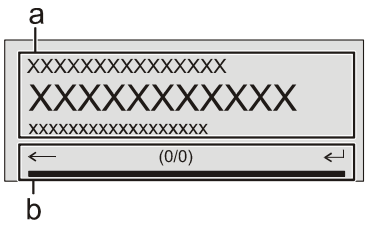
USB	Socket for a USB memory stick or an external hard disc. The storage medium must be formatted with the FAT16 or FAT32 file system. The USB storage medium can be powered via the USB socket provided that its current drain meets the USB norm (< 500 mA). Normalised 2.5" USB hard discs can be connected directly to this socket, i.e. they require no mains PSU.
🎧 (PHONES/ headphones)	Socket for stereo headphones with an impedance of at least 50 Ω. ⚠ **Continuous listening at very high volume via headphones or earphones can result in permanent hearing loss. Please consider your own health carefully, and avoid constant listening at high levels via headphones or earphones.**
iPod Dock	The iPod Dock in the top cover of the *Caruso* can be used to connect an iPod with Dock Connector to your *Caruso*. The iPod can then be controlled via the *Caruso*. If an iPod is plugged into the Dock, its battery is automatically recharged.

Screen

All information relating to machine status, the current music track and list navigation is displayed on the graphic screen of the *Caruso*. The display is context-sensitive, and in part varies according to the capabilities and facilities of the service to which you are currently listening.

The most important information is highlighted on the screen according to context. Supplementary information is provided by symbols above and below the main data. The symbols used are listed and explained in the table below.

In Stand-by mode the screen can show the time of day (see Chapters **'Alarm Timer, Alarm Timer menu, menu point screen brightness (Stdby)'**).



e. g.

The on-screen displays and symbols vary according to the currently active function (SCL, Digital IN) and the type of music being played.

The basic division of the screen:

- Display area (a) shows information relating to the music being played. The essential data is displayed in larger type in the main line.
- The bottom line (b) displays supplementary context-sensitive information and operating notes.

The following symbols may appear on the screen:

	Making a connection (Wait / Busy) This rotating symbol indicates that the *Caruso* is processing a command, or is making the connection to a service. These processes may take a little time, depending on the speed of the network and its current load. During this period the *Caruso* may be muted, and may not respond to commands. Please wait until the symbol disappears before trying again.
	Indicates a **playable music track** or a **playback list** (playlist)
	Indicates a **folder** which contains further folders or lists.
	Indicates that a source is being played via a **cable connection**.
	Indicates that a source is being played via a **radio connection**.
▶	Indicates that the *Caruso* is playing a radio station or a music track.
II	Pause symbol
1:20 128 k	Buffer display (full indicator, memory display) and display of data rate (if available): The higher the data rate, the better the reproduction quality.
1:20	Display of elapsed playback time. This display is not available for all services.
←	Indicates that a higher menu or select level can be accessed by pressing the ◀ button.
0 / **0**	Position indicator in Select lists. The first figure states the current position in the list, the second figure the total number of list entries (length of list).
↵	Indicates that the selected menu point / list point can be activated by pressing the ▶ button.
ABC or **123** or **abc**	Character input mode indicator

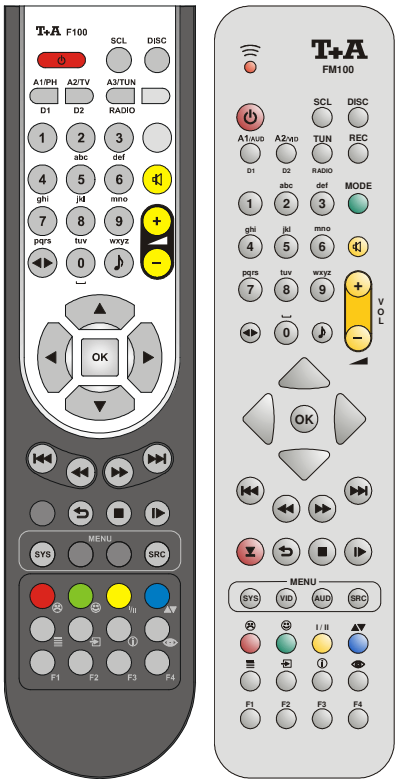
Remote Control

Introduction

In general terms the function of the buttons on the remote control handset are the same as the corresponding buttons on the front panel of the machine.

The infra-red remote control handset is located in the screen area of the *Caruso*. There must be line of sight contact between the **F100** / **FM100** and the screen.

The following tables show the remote control buttons and their function when operating the machine.



(red)	Switches the machine on and off
	Direct source select buttons. If the machine is switched off, pressing one of these buttons turns it on and at the same time selects the corresponding source device.
SCL	Selects the Streaming Client function of the *Caruso* ,(Internet Radio, access to music servers) and / or the iPod (you may have to press several times).
DISC	CD / DVD function of the *Caruso*
A1/PH D1	Brief press: Analogue input 1 of the *Caruso*
A2/TV D2	Brief press: Analogue input 2 of the *Caruso*
A3/TUN RADIO	Brief press: Radio function of the *Caruso*
1 2 abc ... 9 xyz 0 ␣	Direct alpha-numeric input, e.g. track number, quick station select, radio station. The buttons 0 and 1 are also assigned special characters. During the text input procedure you can use the ▲▼ button to toggle between numeric and alpha-numeric input, and bet-ween capitals and lower-case letters.
(yellow)	In Stand-Alone mode: Switches sound on and off (MUTING)
- ◢ + (yellow)	In Stand-Alone mode: Reduces / increases volume (volume control rocker)
♪	Tone settings Brief press opens the tone control settings menu: Balance / Treble / Bass / Sub-woofer / Loudness / Sound field The menu points are called up using the ▲ / ▼ button, and can be altered using the ◀ / ▶ buttons. For more information on the tone controls please see the Chapter 'Tone settings' (TONE menu).

* FM100: optional accessory

	Radio	Streaming Client	Disc Player	iPod
	Navigation buttons			
◀	Return to previous point	Return to previous point During alpha-numeric character input the ◀ button can be pressed to erase a character.	Cursor movement to the left	Return to previous point
▶	Confirms the input	- Opens a folder - Starts a piece of music - Selects an Internet station	Cursor movement to the right	Confirms the input
▲	Selects the previous point within a list	Selects the previous point within a list	Cursor movement upward	Selects the previous point within a list
▼	Selects the next point within a list	Selects the next point within a list	Cursor movement downward	Selects the next point within a list
OK		Confirmation button when entering data - Opens a folder - Starts a piece of music		
	Mechanism control			
⏮		Selects the previous track in the playlist	Selects the previous track during playback	Selects the previous piece in the playback list
◀◀ ▶▶	Brief press: Manual tuning Long press: **Search**		Rewind / fast forward to search for a particular passage The search speed can be varied by repeatedly pressing these buttons. Press the ▶ button to end the search.	Rewind / fast forward to search for a particular passage
⏭		**Selects the next piece in the playlist**	**Selects the next track during playback**	Selects the next piece in the playlist
↩ (REPEAT)		Repeat function (see Chapter '***Operating the Streaming Client***')	Repeat function (see Chapter '***Operating the Disc Player***')	Repeat function (see Chapter '***Operating the iPod***')
■ (STOP)		**Ends playback**	Brief press: Ends playback Long press: Opens and closes the CD drawer in **STOP** mode	Ends playback, unloads the playlist
▶ (PLAY/ PAUSE)	**Select station from Favourites list**	• Starts playback of titles / folders (**Play** function) • During playback: Halts playback (**pause**) or resumes playback	• Starts playback (**Play** function) • During playback: Halts playback (**pause**) or resumes playback	• Starts playback (**Play** function) • During playback: Halts playback (**pause**) or resumes playback

	Radio	Streaming Client	Disc Player	iPod
	Menu functions			
SYS	Opens the **System Configuration** menu (e.g. adjusting screen brightness)			
SRC	Opens the Favourites menu when the Favourites list is displayed	Brief press: Switches to main menu (Home) Long press: Opens the network configuration menu	Brief press: Opens the Disc menu Long press: Opens the DVD Player set-up menu	
	Special functions			
☹ (red)	Long press: **Removes a favourite from the station list**	Long press: Removes a favourite from the Favourites list created on the *Caruso*		
☺ (green)	Adds a favourite to the station list	Adds a favourite to the Favourites list created on the *Caruso*		
I/II (yellow)	Button for toggling between **Stereo** and **Mono reception** The **Stereo** setting is indicated constantly by a ⧉ symbol in the screen window. The **Mono** setting is indicated constantly by a ● symbol in the screen window.		DVD only Brief press during playback: Switches between the soundtracks available on the disc	
▲▼ (blue)		During character input: When pressed (repeatedly): toggles between numeric and alpha-numeric input, and between capitals and lower case script. In lists: **Search function (Alpha Search)**		
≣	Displays the Favourites list	Displays the Favourites list created on the *Caruso*	DVD only During playback: selects sub-title language or switches sub-titles on and off.	
⮆	Memory button for quick station select	Memory button for quick station select		
◐		**Toggle switch between display of current music track and list navigation**		
👁			DVD only Long press (repeated if necessary): Switches between camera angles	
F1				Shuffle function (see Chapter '***Operating the iPod***')

Basic Functions of the *Caruso*

The basic functions of the *Caruso*, described in this chapter are always available, regardless of the selected source.

Source switching

The source buttons on the front panel or the remote control handset are used to select the desired internal source (Disc Player, VHF radio, Streaming Client) or an external source (iPod, Aux1, Aux2) for playback.

Once the *Caruso* has switched to the appropriate source, internal sources and iPods connected to the iPod Dock can be operated using the remote control handset or the front panel buttons.

Please refer to the following chapters for details of operating the individual source devices.

Volume control

The volume of the *Caruso* can be adjusted in fine increments using the VOL + / VOL - buttons on the front panel, or the **-** **+** button on the remote control handset. A brief press on one volume button increases or reduces the volume by one increment. Holding one of the volume buttons pressed in causes the volume to change continuously.

Tone settings (Tone menu)

The *Caruso* features a range of facilities for adjusting the sound to suit your personal preferences, the system's location and your room acoustics. All sound settings are grouped together in the tone control menu (TONE menu).

The tone control menu is called up using either the ♪ buttons on the remote control handset or on the machine itself using the menu point Tone (tone control settings) in the SYS menu.

The individual menu points may offer different set-up options depending on the type of reproduction, i.e. via the integral speakers or external loudspeakers. The features of the tone control menu are explained in detail in the next section.

	Adjustment range / Options:	**Explanations:**
Balance	-61 ... centered ... +61	This menu point allows you to alter the balance between the left and right loudspeakers in order to compensate for an unfavourable listening position. The balance can be altered in 1 dB increments. The current value is always displayed.
Treble **Bass**	-12 ... 0 ... +12	These two menu points are used to alter the treble and bass settings. The value affects the internal loudspeakers and any external speakers connected to the system.
Center (This menu point only appears if the menu point Caruso + External is selected in the System Configuration / Loudspeaker menu.)	-15 ... 0 ... +15	This menu point allows you to alter the balance between the loudspeakers of the *Caruso* and any external loudspeakers connected to the system.
Ext. Subwoofer (This menu point only appears if an external sub-woofer is connected, and it is switched on in the System Configuration / Loudspeaker menu.)	-15 ... 0 ... +15	The volume of the sub-woofer can be adjusted at this point. Adjust the volume of the sub-woofer to suit the acoustic conditions of the listening room, and the volume of the other channels.

Loudness

off / on

The amplifier features a volume-dependent tone control (**LOUDNESS**) which compen-sates for the frequency-dependent sensitivity of the human ear, and therefore of human hearing, at very low volume levels.

This set-up option is used to switch loudness on or off.

Tone (sound fields)

The following set-up options are available if the internal loudspeakers of the *Caruso* are used for playback.
(See the 'System Configuration menu / Loudspeaker menu' for the method of switching to the internal loudspeakers)

Normal	Linear tone control, without equalisation, suitable for using the system on sideboards and similar locations.
Smooth	If you prefer a relaxed sound image with slight de-emphasis on the treble, select the Soft sound field option.
Near	If the listening distance to the *Caruso* is very small (<1.5 m), we recommend the Close setting (close-range equalisation)
Speech	This option improves the comprehensibility of speech in spoken word programs, reportage and sports transmissions.
Shelf	If the *Caruso* is set up in a confined position close to shelf walls, the result may be excessive emphasis on low frequencies; this can be cor-rected by selecting the SHELF set-up option.
Table	Setting up the system on a table with a large top can cause particular frequency ranges to be amplified. This problem can be corrected by selecting the Table set-up option.

The following set-up options are available if the *Caruso* is operated in conjunction with external loudspeakers.
(See the 'System Configuration menu / Loudspeaker menu' for the method of switching to external loudspeakers.)

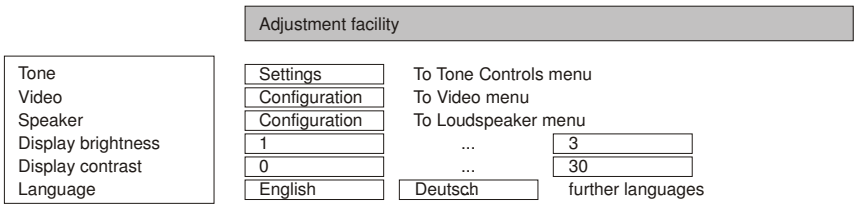
Normal Wall Corner	Positioning loudspeakers close to a wall or corner has the effect of emphasising the low frequencies, which can result in an unnatural, bass-heavy sound image. Excessive bass emphasis caused by speaker positioning can be corrected in this menu point by selecting one of the set-up options Wall or Corner.

System Settings (System Configuration menu)

The System Configuration menu contains general device settings which are variable by the user. This menu is described in detail in the following chapter.

Calling up and operating the menu

- To call up the menu press the SYS button briefly on the front panel or the remote control handset.
- When the menu is opened, the screen displays the following Select points:



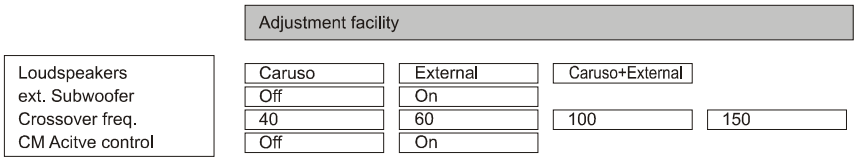
- Use the ▲ / ▼ buttons to select a point in the menu.
- If you wish to change the selected menu point, first press the OK button, then use the ◀ / ▶ buttons to alter the value.
- To accept the setting once you have changed the value, press the OK button again.
- If you wish to quit **without** accepting any alteration, press the ■ button at any time.
- Press the SYS button again to leave the menu.

Menu point
Tone

Select this menu point to move to the Tone Controls menu.

Menu point
Loudspeakers
(Loudspeaker menu)

Activating this menu point calls up additional on-screen menu points which relate to the loudspeakers.



Sub-point
Loudspeakers

Choosing the menu point Caruso + External selects a 3.x configuration; in this mode the *Caruso* should be set up as the Centre speaker.

Sub-point
Ext. Subwoofer

Selecting the menu point 'Caruso' in the Loudspeaker sub-point, and setting the menu point 'On' in the Sub-woofer sub-point, switches off the integral bass loudspeaker.

Sub-point
Crossover freq.

This menu point only appears if you select the menu point 'On' in the Sub-woofer sub-point.

Sub-point
CM Active control

At this point you can switch the Trigger voltage for **T+A** *CM Active* loudspeakers on and off.

If you set the trigger voltage option to **'On'**, then **T+A** *CM Active* loudspeakers connected to the PRE output of the *Caruso* are switched on together with the *Caruso*. This avoids the usual problem with automatic power-on systems: that of "swallowing" the first few beats of the music.

If you connect different (active) loudspeakers or output stages to the unit, the trigger voltage should be set to **'Off'**.

Menu point
Video

This menu point is used to set up the output for the iPod.
If you select YUV, this must be supported by the iPod.

Menu point
Disply brightness
(Screen brightness)

Here you can adjust the brightness of the screen in normal use to suit your personal preference. The available settings are:
- 1 to 3

Menu point
Display contrast

This menu point is used to adjust the screen's contrast setting.
Screen contrast varies according to the viewing angle. Please set a value which enables you to read the screen easily in your chosen conditions.

Menu point
Language

In this menu point you determine the language for the menus of the *Caruso*.
The language used for transferred data, e.g. from an iPod or a UPnP-AV server, is determined by the other machine, and **cannot** be set on the *Caruso*.

Network Settings

The method of using this menu and its settings are described in detail in the Chapter Installation / Using the system for the first time, Network configuration.

Calling up the menu

- The menu is called up using the SRC button on the front panel or the remote control handset. Hold the button pressed in until the Streaming Client function is selected.

Alarm Timer

The machine features an integral Timer module which is capable of switching the *Caruso* on with a selectable source at a programmable time (alarm clock).

Selecting an alarm timer in the Alarm Timer menu switches the function on and activates it. The active alarm timer is indicated by a constantly glowing LED above the ⏲ button.

You can now switch the *Caruso* off. The *Caruso* will switch itself on at the preset time for as long as the LED above the ⏲ button is lit.

Alarm function
- with automatic power-off

If the Timer is active, the *Caruso* switches itself on at the programmed alarm time.
Once switched on, the LED above the ⏲ flashes.
The *Caruso* automatically switches itself off again one hour after the alarm is trig-gered, unless the alarm has already been disabled during this hour.

If you disable the alarm function with a long press on the ⏲ button, the LED ceases to flash. In this state the Timer does **not switch itself off** automatically after an hour! If you want to switch the machine off, you must do so manually.

Switching the Timer off

A brief press on the ⏲ button calls up the Alarm Timer menu, where the timer can then be disabled.

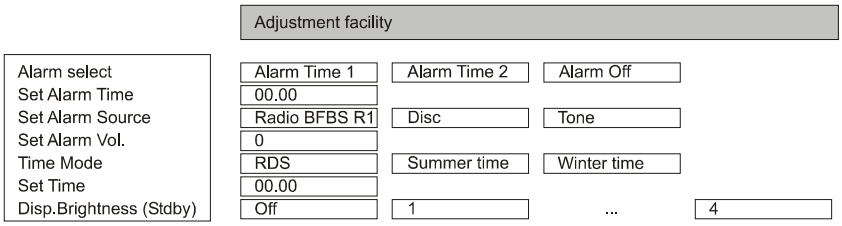
ⓘ A brief press on the ⏲ button calls up the Alarm Timer menu even when the machine is switched off; you can then make any changes you like without having to switch the system on beforehand.

Alarm Timer menu

Calling up and operating the menu

- A brief press on the ⏲ button on the front panel calls up the menu.
- When you open the menu, you will hear the currently set alarm source at the currently set alarm volume.

  The screen displays the following Select points:



- Use the ▲ / ▼ to select a point in the menu.
- If you wish to change a selected menu point, first press the OK button, and then use the ◀ / ▶ buttons to alter the value.
- To accept the setting once you have altered the value, press the OK button again.
- If you wish to quit **without** accepting an alteration you have made, press the ■ button at any time.
- Press the ⏲ button on the front panel again to leave the menu.

Menu point
Alarm select

In this menu point you can select whether the machine is to be switched on automatically, and using which alarm.

Menu point
Set Alarm Time

Manual alarm time setting for the currently active alarm. Any change you make at this point takes place slowly at first; holding the button pressed in increases the rate of change.

Menu point
Set Alarm Source

Selects the source which is to be switched on at the alarm time point.

If you select the menu point Radio, you can use the ▲ / ▼ buttons to select a radio station from the Favourites list.

⚠ Waking to the radio:
Take care to set a station which can be received.

Waking to a disc:
When you activate the alarm function please ensure that there is a playable **CD** in the disc mechanism.

Menu point
Set Alarm Vol.

You can set the alarm volume at this point. If you change the volume setting, the system immediately accepts the displayed volume level, and the change in volume is audible.

Menu point
Time Mode

This menu point is used to determine how the internal clock is set.

RDS	If you select the menu point RDS, you can select a radio station from the Favourites list using the ▲ / ▼ buttons. If you select the **'Any'** setting, the time of day is read out automatically from the RDS signal of the current selected station, and adopted by the machine. This occurs at night, and about three minutes after switching on. If you have selected a station, the time of day is automatically read out from the RDS signal at night. If the selected station is the current listening source, then the time of day is adopted by the machine when switched on. This only works if high-quality RDS reception is available. It is now impossible to set the wrong time of day manually!
Summer time	The time of day can be set manually in the menu point **'**Set time**'**.
Winter time	The time of day can be set manually in the menu point **'**Set time**'**.

Menu point
Set Time

Manual method of setting the internal clock to the correct time.

Any change you make at this point occurs slowly at first - holding the button pressed in increases the rate of change.

ⓘ Manual adjustment is only possible if you have set Summer or Winter in the menu point 'Clock mode'.

Menu point
Disp. Brightness (Stdby)

At this point you can adjust the screen brightness in Stand-by mode to suit your personal preference. The brightness setting becomes active immediately. The 'Off' setting can only be selected if no alarm time is active.

Slumber-function

The machine has a slumber function that switches it to standby after a selectable time interval between 15 minutes and 2 hours. This selection can be done in steps of 15 minutes.

Activate slumber function

While the *Caruso* is powered up keep the ⏻ key of the remote control or the ON key of its front panel pressed until the display shows the slumber time.

Change the slumber time

While the slumber function is active the slumber time can be modified in steps of 15 minutes using the ◀ / ▶-keys. Any change comes immidiately into effect.

Turn off slumber function

While the slumber function is active it can be turned off by keeping one of the keys ⏻ or ON pressed until the displaying of the slumber time is not shown any longer on the display. Alternatively the slumber function is also ended when the *Caruso* is switched off.

ⓘ As long as the slumber function is active there is no other user operation possible besides the functions mentioned above and the changing of the volume.

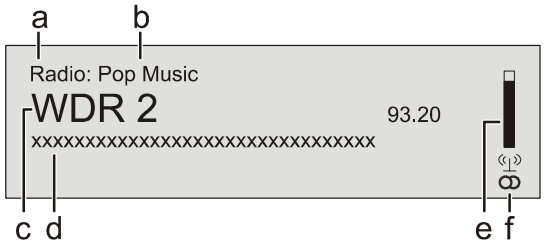
Operating the source devices in detail

Operating the Radio

RADIO

First select the radio as source by pressing the RADIO button.

Device display in Radio mode



a) When you are listening to a radio station in radio mode, the message **'Radio'** appears in the top line of the screen.

b) Here the music type or style is displayed, e.g. Pop Music.
This information is only displayed if the transmitting station broadcasts it as part of the *RDS* system. If you are listening to a station which does not support the *RDS* system, or only supports it in part, these information fields remain empty.

c) The frequency and / or the station name is displayed in enlarged form. If a station name is displayed, its frequency is shown at the end of the line.

d) These lines display information which is broadcast by the station (e.g. Radiotext).

e) The *field strength* and therefore the reception quality to be expected from the set transmitting station can be assessed from the field strength.

f) Display of Stereo **'∞'** / Mono**'●'**

***RDS* functions**

If the station being received is broadcasting relevant RDS data, the following information will be displayed on the screen:

- Station name
- Radiotext
- Programm type (genre)

Manual adjustments

Station Search

Holding one of the ◀◀ / ▶▶ buttons pressed in initiates a station search in the upward or downward direction. The station search stops automatically at the next station.

Mono / Stereo

You can toggle the radio of the *Caruso* between stereo and mono reception by briefly pressing the I/II button. The reception mode is shown on the screen by the following symbols:

'●' (Mono) or **'∞'** (Stereo):

If the station you wish to listen to is very weak or very distant, and can only be picked up with severe background noise, you should always switch to MONO mode as this reduces the unwanted hiss significantly.

ⓘ When you store the station in the Favourites list, the settings you enter for this station are also stored, and are automatically restored the next time you call up the station.

Favourites List and *Presets*

In addition to manual tuning and searching, the radio of the *Caruso* also features a **Favourites list** and **Presets**, which provide a fast, convenient method of managing your preferred stations and calling them up at any time.

You can edit the Favourites list to suit your preferences (see section **'Adding stations to the Favourites list** / **Erasing stations from the Favourites list'**).

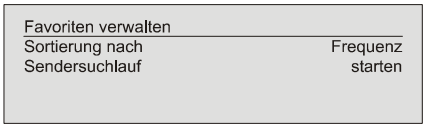
It is also possible to store the stations under a station number (Preset), and then to call it up directly by entering the station number. Presets are particularly useful if you wish to call up stations when the screen is not in sight (e.g. from an adjacent room), or via the domestic control system.

Favourites List

The Favourites list allows the user to store preferred radio stations, i.e. those frequently selected.

Creating the Favourites list

When you have called up the Favourites list by pressing the ☰ button (F100 / FM100), you can press the SRC button to call up the Favourites menu, from which the following points can be selected using the ▲ / ▼ buttons:



Select the menu point **'Scan for stations'** and initiate the station search with the OK button. The screen displays the message **'Auto Store active',** and the *Caruso* now automatically stores up to sixty receivable stations in the Favourites list.

Adding stations to the Favourites list

First set the desired station manually (by briefly pressing the ◀◀ / ▶▶ buttons) or using a search (holding the ◀◀ / ▶▶ buttons pressed in). As soon as the station is audible, you can add it to your Favourites list by pressing the ☺ button.

Erasing stations from the Favourites list

Open the Favourites list. Select the station you wish to erase from the list, hold the red ☹ button pressed in for a few seconds: the station is now removed from the Favourites list. After the erasure the tuner automatically switches to the next station in the Favourites list.

Sort function

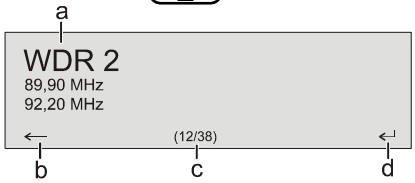
The Favourites list can be sorted according to various criteria; these are selected in the menu point **'Sort Favourites by'**:

Frequency	Stations are sorted by frequency in ascending order (RDS stations only)
Station name	Stations are sorted alphabetically by station name
Program ID	Stations are sorted by station group (RDS stations only)

Now use the ◀ / ▶ buttons to select the desired sort criterion, and confirm your choice by pressing the OK button.

Selecting radio stations from the Favourites list

- Call up the Favourites list with the ☰ button.



  a) Use the ▲ / ▼ buttons to select a stored station from the Favourites list. The selected station is displayed in enlarged form.
  b) Press the ◀ button to return to the station previously selected.
  c) Position display in the Favourites list.
  d) Press the ▶ / I▶ / ▶II / OK button to select the station displayed in enlarged form.

- You can also select stations directly, without calling up the Favourites list as described above, by briefly pressing the ▲ / ▼ buttons in the Favourites list.

Presets

Storing a *Preset*

- Select a station, either using the ◀◀ / ▶▶ buttons, or from the Favourites list.
- Call up the Store Preset function by pressing the ⊡ button.
- An input window now appears in which you can enter a number using the numeric buttons (0 to 9). The Preset is stored when you press a numeric button. The front panel screen briefly displays the message **'Preset Stored at'** to confirm this.

Calling up a *Preset*

At any time you can quickly call up a station stored as a Preset by entering its Preset number using the **F100** / **FM100's** numeric buttons 0 to 9.

Operating the Disc player

Basic functions

For all the functions described in this section the **Disc Player must be selected as listening source**. The first step is to switch the *Caruso* to Disc Player mode by pressing the DISC button on the remote control handset.

Inserting a CD

- Open the disc drawer by pressing the ⏏ button on the front panel of the central unit (long press on the ■ button on the F100 / FM100).
- Place the disc **centrally** in the appropriate depression in the drawer, **with the side to be played facing down**.
- Close the drawer by briefly pressing the ⏏ button on the front panel of the central unit (long press on the ■ button on the F100 / FM100).

When the drawer is closed the machine reads the disc. Once read, the disc can be started.

ⓘ If you see the message 'UNKNOWN' on the screen after the disc is read, then the disc in the drawer is a format which the *Caruso* is unable to play (see chapter 'Compatible formats' at the end of the chapter).

Starting the disc

If the disc in the drawer is a **Music CD** or **Video CD** (VCD, S-VCD), the machine will read the disc data, and you can then start playback by pressing the ⏯ / ▶ button.

The behaviour of a **DVD** after it has been read is determined by the DVD itself, and may vary slightly from one disc to another. In most cases an introductory message appears on the screen when the DVD has been read, followed by a menu (*DISC MENU*).

You can navigate within this menu using the *cursor* buttons, and select various points such as language, sub-titles and sound format. To activate or select a menu point, use the *cursor buttons* to move to it, then press the OK button.

When you have selected all the desired settings, start the film (generally by selecting the menu point 'Play film').

Opening the disc menu (during playback)

The disc menu can be opened at any time during playback by briefly pressing the SRC button. By this means you can call up all the Disc Menu functions even when the disc is playing.

Track select (during playback)

You can switch to the next or preceding track on the disc using the ⏭ / ⏮ buttons on the remote control handset.

A track can also be selected directly by entering its track number using the numeric keypad on the remote control handset.

Pause (during playback)

Pressing the ⏯ / ▶ button halts playback temporarily. Pressing the ⏯ / ▶ button resumes playback..

Search (during playback)

The search can be started in the forward or reverse directions by pressing the ◀◀ / ▶▶ buttons on the remote control handset.

Pressing these buttons repeatedly varies the search rate. The search is concluded by pressing the OK button.

ⓘ **CD-Text**

If the CD being played contains text information (CD-Text), then the text is displayed on the screen connected to the system.

Special functions

Repeat function

The ⟲ button on the remote control handset cycles through the repeat function options of the *Caruso*. Press the button repeatedly if required until the repeat mode you wish to use appears on the screen.

The following repeat modes are available, according to disc format:

Display	Function	Disc format
RPT CH	Repeat chapter	DVD
RPT TT	Repeat track	DVD
RPT ONE	Repeat track	CD, MP3
RPT FLD	Repeat folder	MP3
SINGLE	Play tracl (omce)	MP3
RPT ALL	Repeat whole disc	DVD, CD, (S)VCD
OFF	Normal playback -	
(no display)	No repeat	

Sub-title language (DVD only)

You can select the sub-title language, or switch sub-titles on and off, during playback by pressing the ≣ button.

Sound track (DVD only)

During playback you can select the sound tracks present on the disc by pressing the I/II button.

Camera angle (DVD only)

If several camera angles are available for a particular sequence on a DVD, this is indicated by a camera symbol on the screen.

You can switch between the various camera angles by holding the 👁 button pressed in, repeatedly if necessary. The angles can also be selected directly using the numeric buttons.

Playing MP3 / JPEG / Picture CDs

The *Caruso* is able to play MP3 music discs, JPEG discs and Picture Discs. These discs are generally controlled using the optional TV / video monitor. Limited control of MP3 CDs is also possible without a TV or video monitor (see 'MP3 playback without screen').

JPEG / PICTURE CD

After you insert a JPEG / Picture CD the monitor displays the menu structure of the disc.

A folder can be selected by pressing the ▲ / ▼-button on the remote control handset. The folder can then be selected and opened using the OK button on the remote control handset. Select the picture you wish to view using the ▲ / ▼ buttons.

As soon as a picture is selected (marked yellow), it is superimposed on the menu as a preview.

Press the OK button to confirm your choice, and start a slide show in full-screen mode; this continues to the end of the folder or directory. You can interrupt playback at any time by pressing the ⏯ / ⏭ button, and stop it completely with the ■ button.

Some menus contain a large number of entries, and you can shorten the time it takes to move around such menus by holding the OK button pressed in; this causes the system to skip forward by four folders or tracks at a time.

You can also enter the desired album / track number directly using the numeric buttons on the remote control handset.

Functions during playback

- Pressing the ▲ / ▼ buttons mirrors the displayed picture around the vertical or horizontal axis.
- Pressing the ◀ / ▶ buttons rotates the picture to the right or left.
- A long press on the OK button displays the next picture.

MP3 CD

After you insert an MP3 CD the monitor displays the menu structure of the disc.

You can select an album directory using the ▲ / ▼ buttons, and open it by pressing the OK button. Select the track you wish to listen to using the ▲ / ▼ buttons.

Press the OK button to confirm your choice, then playback of the selected track commences, and continues to the end of the directory. You can interrupt playback at any time by pressing the ⏯ / ⏭ button, and stop it completely with the ■ button.

Some menus contain a large number of entries, and you can shorten the time it takes to move around such menus by holding the ⏮ / ⏭ button pressed in; this causes the system to skip forward by four folders or tracks at a time.

Functions during playback:

- Pressing the ▲ / ▼ buttons selects a track (marked yellow) from which playback is to resume after you press the OK button. The currently stored track is marked in white.
- A long press on the OK button resumes playback at the next track.
- Pressing the ◀◀ / ▶▶ buttons starts the fast forward / rewind process. You can press the OK button at any time to revert to normal playback mode.

MP3 playback without screen

ⓘ MP3 CDs can also be reproduced without a screen attached. This is accomplished by accessing the DVD Player set-up menu in the 'Preferences' menu, and selecting the setting 'No menu' under the point MP3/JPEG-NAV (see Chapter 'DVD Player Setup Menu, Preferences').

Compatible formats

The *Caruso* is able to play the following formats:

Audio formats

CD-Audio	(CDDA, CD-R, CD-RW)
MP-3 CD	(MP3: see the info box below)

Video formats

DVD-Video	(DVD, DVD-R, DVD-RW)
VideoCD	(VCD, S-VCD)
JPEG Picture CD	

Requirements regarding MP3 discs

There are many different MP3 formats. When creating an MP3 disc please keep to the format information stated below. If you decide to use a different format, you may find that the disc does not play, or the sound is distorted and interrupted during playback. A typical MP3 CD contains a very large number of music tracks, so it may take more than ten seconds for the disc player to read the MP3-CD.

If you insert a multi-session disc, please note that the player only supports the first ”session”.

The following formats are supported:

- CDs to ISO 9660 formats
- max. 30 characters
- max. file levels: 8
- max. ALB number 32
- supports BVR bit-rate
- supported sampling frequencies for MP3-CD: 32 kHz, 44.1 kHz, 48 kHz
- supported bit-rates for MP3-CD: 32, 64, 96, 128, 192, 256, 320 (kbps)

The following formats are **not** supported:

- files such as *.WMA, *.AAC, *.DLF, *.M3U, *.PLS
- file names including Chinese characters
- discs in which the recording session was not completed (non session closed)
- discs recorded using the UDF format
- files which contain ID3V2 tags

Compatibility with recordable media

The *Caruso* can play recordable (CD-R, DVD-R) and rewritable (CD-RW, DVD-RW) discs (see Specification), provided that they are in accordance with the general standard for CD-Audio and DVD-Video discs.

There are now so many different types of blank discs, disc recorders (burners) and burning software that it is not possible to guarantee general compatibility.

If you encounter a compatibility problem, we recommend that you try using different blank discs, a different burner or different burning software.

Setup Menu (DVD Player configuration)

If a TV or monitor is not present in the system, no adjustments need to be made in the DVD Player Setup menu.

DVD Player Setup Menu

The DVD player in the *Caruso* must be set up to match the characteristics of your TV set and your preferred methods of use. The settings required for this are grouped together in a 'DVD Player Setup Menu', which is displayed on your television screen. In most cases you will only need to adjust the settings contained in the Player Setup Menu once, i.e. when the machine is initially set up and installed. You may need to refer to the operating instructions supplied with your TV set in order to establish the correct setup values, so please have the manual to hand before you start this process.

The Player Setup Menu is divided into the following sub-menus:

- GENERAL SETUP MENU
  This is where you set general device settings such as screen size, display brightness etc.

- AUDIO-SETUP MENU
  In this sub-menu you set the audio characteristics, such as the sound mode and format of the digital output.

- VIDEO-SETUP
  At this point you can set the picture settings of the *Caruso* such as the screen format (normal 4:3 / wide-screen 16:9), video norm and colour / contrast.

- PREFERRED SETTINGS
  Here you can set your favoured personal settings, such as the preferred language for sound reproduction and sub-menus, child-protection measures etc.

The "Preferred Settings" sub-menu can only be called up while the disc is stopped.

An overview of the Player Setup Menu is shown in the menu summary on the next page. The adjustment facilities of the individual menus are explained in detail in the following sections.

Operating the SETUP menu

Ensure that the disc player is selected as the listening source, that your TV set is switched on, and that it is switched to the *Caruso* picture input (AV input).

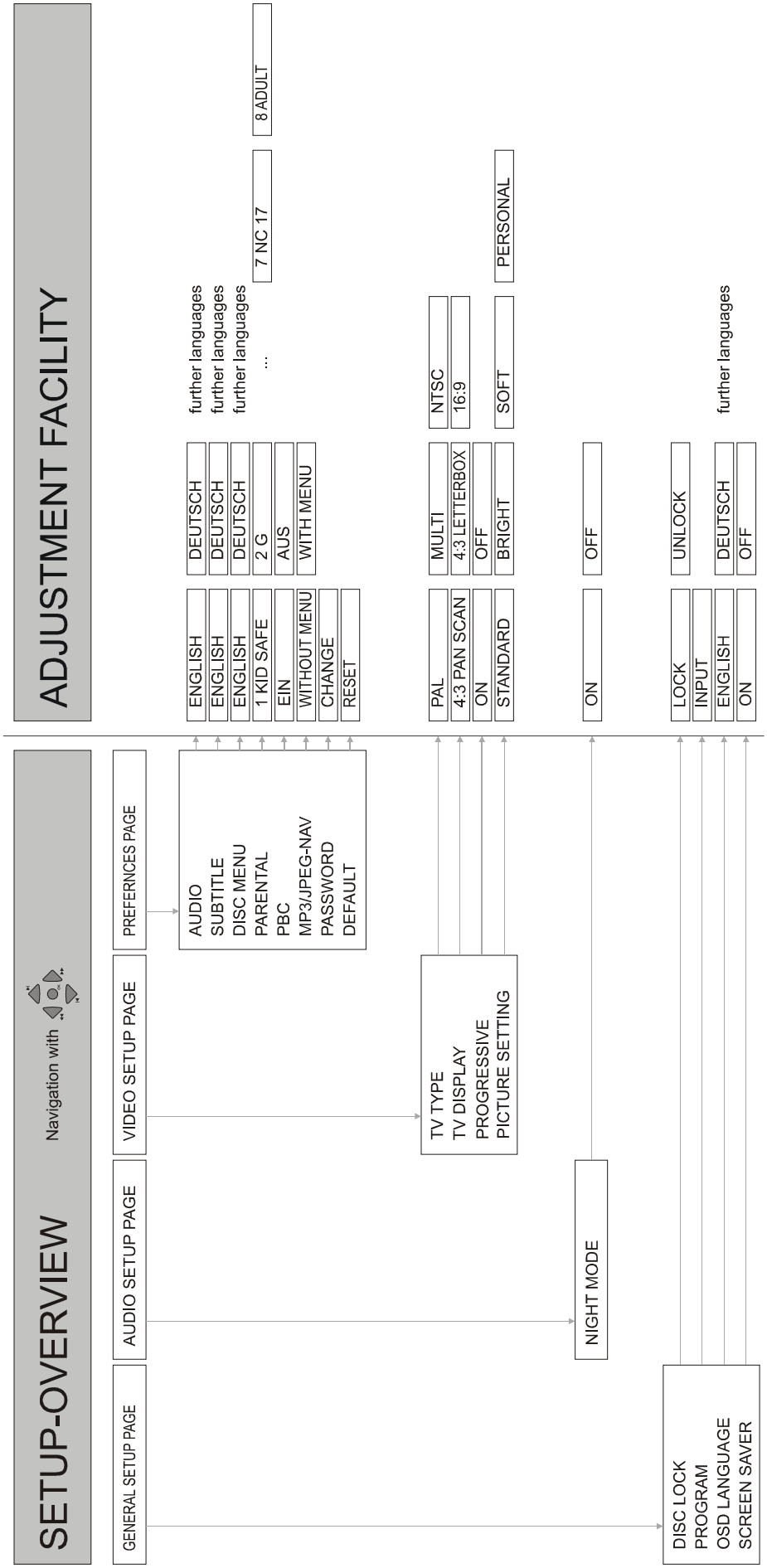
The Player Setup Menu is opened with a long press on the blue (SRC) button on the remote control handset; please hold this button pressed in until the Player Setup Menu appears on your screen. The integral screen on the *Caruso* shows **'SETUP'** while the menu is open.
You can now navigate within this menu using the *cursor buttons*, and enter the appropriate settings. When you have made a particular selection, press the (OK) button to confirm your choice; the setting is then accepted and stored.

When you open the menu you will initially be at the top line of the screen menu. At this point you can select the sub-menu you wish to use (GENERAL / AUDIO / VIDEO / PREFERRED SETTINGS) using the (◀) / (▶) buttons.
Press the (▼) button to open the appropriate sub-menu. You can now find your way to a particular menu point using the (▼) / (▲) buttons.
If you wish to change the setting of any particular menu point, press the (▶) button and select the desired setting using the (▼) / (▲) buttons. Press the (OK) button to confirm your selection, and the setting is then accepted.
In each case pressing the (◀) button takes you back to the next higher menu level.

Closing the SETUP menu

To leave the SETUP menu press the (◀) button - repeatedly if required - until you return to the topmost line of the menu. Now select the 'End SETUP menu' option, and confirm by pressing the (OK) button.

DVD Player Setup Menu



General Setup Menu

	Adjustment facility		
DISC LOCK	LOCK	UNLOCK	
PROGRAM	INPUT		
OSD LANGUAGE	ENGLISH	DEUTSCH	further languages
SCREEN SAVER	ON	OFF	

Disc lock

Not all discs are categorised or coded by the manufacturer regarding their suitability for young persons. You can prevent playback of specific DVDs by blocking them, or alternatively release the DVD for viewing, disregarding its category.

If you block a disc, you will be asked to enter your password (PIN) before playback. Without the password the machine will not play the disc.

ⓘ To set a password see the Chapter 'Preferred settings / Password'.

Programs

You can play the contents of the disc in your own desired sequence by programming the order of the tracks to be played.

In this menu point you can create your own playback program for the disc in the drawer.

You can program the desired tracks in the desired sequence under the point '**INPUT**'; up to twenty tracks can be stored.

OSD Language

In this menu point you can set the language to be used for the disc player's Player Setup Menu.

Screen saver

The screen saver helps to prevent damage to your television screen. If the screen saver is switched on, the TV screen will be switched off after a while if playback has been stopped or paused.

Audio-Setup Menu

	Adjustment facility	
NIGHT MODE	ON	OFF

Night mode

When night mode is switched on, sound is reproduced with a reduced dynamic range.

The result is that loud passages are reproduced more quietly. The 'night mode' is particularly useful when you wish to avoid disturbing neighbours or other people in your house with loud sound special effects in films.

Video Setup

	Adjustment facility			
TV-TYPE	PAL	MULTI	NTSC	
TV DISPLAY	4:3 PAN SCAN	4:3 LETTERBOX	16:9	
PROGRESSIVE	ON	OFF		
PICTURE SETTINGS	STANDARD	BRIGHT	SOFT	PERSONAL

TV Type

This menu contains the options for selecting the TV norm, which must be set to match your monitor or television screen.

PAL

Select this setting if the picture output is to be reproduced on a *PAL* TV set. At this setting, DVDs in *NTSC* format will be converted to the PAL format by the *Caruso*.

Multi

At this setting the *Caruso* carries out no format conversion. The output from PAL DVDs is reproduced as PAL, NTSC DVDs as NTSC.

This setting should only be selected if your television set is a multi-norm type, i.e. one which automatically switches between PAL and NTSC modes.

NTSC

Select this setting if the picture output is to be reproduced on an NTSC television. At this setting, DVDs in PAL format will be converted to the NTSC format by the *Caruso*.

TV Display

In this menu you set the picture output of the *Caruso* to match the geometry of your TV set.

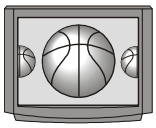
Note:

The format which you select must be available on the disc. If this is not the case, the selected picture format settings will have no effect on the picture during playback.

4:3 Pan Scan

This produces a picture of full screen height; if a wide-screen film is played, the centre of the picture fills the screen of a 4:3 TV set. Less important areas of the picture are cropped.

Pan Scan is only supported by a few DVDs.



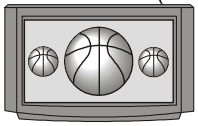
4:3 Letterbox

This option produces a ”wide-screen” reproduction with black bars at the top and bottom of the picture. In this setting the entire picture content of the DVD is reproduced.

We recommend this setting for use with 4:3 televisions.

16:9 (wide screen)

For reproduction on a wide-screen television (16 : 9 format).



Progressive

In progressive scan mode the machine generates full-frame images from the 'half-frames' stored on the DVD; this reduces picture flicker, and therefore gives improved picture reproduction with monitors and TV screens which are capable of reproducing progressive images. Progressive pictures are generated in the form of a YUV component signal, so the *Caruso* must be connected to the YUV input of your monitor or screen in order to be able to use progressive scan.

Before you activate progressive scan, please ensure that your video monitor or television set supports this mode of operation (read the operating instructions if you are not sure)!

If the monitor is not designed for progressive scan, the result will be picture interference, or even no picture at all. If a problem arises, please switch back to normal operation **immediately**.

Off
Disables the progressive scan function.

On
Activates the progressive scan function.

Picture setting

In the Picture Setting menu you can adjust the picture reproduction to suit your personal preference.
You can either select one of the pre-defined picture settings, or move to the menu point 'Personal' and set your preferred settings for brightness, contrast etc.

Basic settings

	Adjustment facility				
AUDIO	ENGLISH	DEUTSCH	further languages		
SUBTITLE	ENGLISH	DEUTSCH	further languages		
DISC MENU	ENGLISH	DEUTSCH	further languages		
PARENTAL	1 KID SAFE	2 G	...	7 NC 17	8 ADULT
PBC	EIN	AUS			
MP3/JPEG-NAV	WITHOUT MENU	WITH MENU			
PASSWORD	CHANGE				
DEFAULT	RESET				

Audio
Subtitle
Disc menu

You can select your preferred menu and synchronous language in the sub-menus Audio, Sub-titles and Disc Menu. If the selected language is not available on a particular disc, the basic disc language will be used instead.

Parental

Some DVDs may have a child-protection feature which applies to the whole disc or just specific scenes on the disc. This function enables you to set your own restriction level. The categorisation takes the form of levels 1 to 8, and is country-specific. In this way you can prevent the playback of particular discs which you consider unsuitable for your children, or - where alternative scenes are available on the disc - force the DVD to play these alternatives.
Home-recorded VCD, SVCD and CD discs do not feature this categorisation, and the same applies to most illegal DVD discs.

ⓘ Some DVDs do not feature categorisation, even though the film category is printed on the disc sleeve. In this case the child protection feature will not work.

PBC

The playback control function (VCD 2.0 only) can be set to '**On**' or '**Off**'. If you select '**On**', the disc menu (if available on the disc) is displayed on the television.

MP3 / JPEG Nav.

If you select the 'with menu' option, an on-screen menu is provided for you to find your way around an MP3 / JPEG disc.

Password

At this menu point you can change the six-digit password. The default password is as follows:

136 900

Use the numerical keypad to enter the 6-digit code, then enter your new code, and confirm it by entering it a second time.

The new password is now valid. Please remember the new password carefully, as you will need to enter it for all access functions from now on.

ⓘ If you have forgotten your old password, enter '136900'.

Default

If you select the 'Reset' menu point (reset of basic settings), all settings will be reset to the factory default settings with the exception of your child-protection password.

Operating the Streaming Client

General Information on the Streaming Client

The T+A *Caruso* includes what is known as a 'Streaming Client'. This is a new class of playback devices for media content, providing a means of playing music which is stored on a vast variety of sources. These sources may be an iPod or a USB hard disc connected directly to the *Caruso*, but they may also be thousands of miles away (e.g. Internet radio station). The Streaming Client can access such remote sources via a home network and the Internet.

ⓘ The network configuration is explained in the Chapter **'Network Con-figuration'**.

The *Caruso* Streaming Client can access the following sources:

Local sources (direct connection)	**Remote sources (via home network or Internet)**
USB memory sticks and USB hard discs	Internet radio
	NAS server (with UPnP-AV server)
	PC (with UPnP-AV server)

The media content formats which the *Caruso* can reproduce are very wide-ranging, and extend from compressed formats such as MP3, WMA, AAC and OGG Vorbis to high-quality non-compressed data formats such as FLAC and WAV, which are thoroughly audiophile in nature. A full listing of all possible data and playlist formats is included in the Specification, which you will find in the Appendix to these instructions.
Since virtually no read or data errors occur when electronic memory media are accessed, the potential reproduction quality is even higher than that of CD. The quality level may even exceed that of SACD and DVD-Audio.

Select Lists

The music content to be played is chosen from Select Lists. These lists are operated using the navigation buttons (cursor buttons) which you will find on the remote control handset and on the front panel. All content can be accessed via the main menu. Internet Radio in particular offers a huge number of stations, which can result in long searches or periods of navigation. We therefore recommend that you store your preferred stations in a ***Favourites List***, as this makes them easy and fast to access, with no protracted searching. It is also possible to store Internet radio stations as ***Presets***, just as you do with normal radio; they can then be called up directly just by entering a number.

The media content can be listed according to various criteria - Internet radio stations e.g. by country of origin, genre or alphabetical, music from media servers e.g. by artiste, album, track, genre, etc.

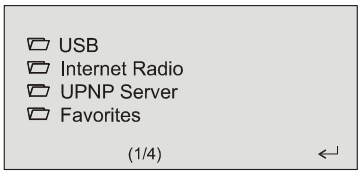
ⓘ The exact form of the displayed list and the preparation of the content also depend to a large extent on the capabilities of the server, i.e. the full facilities of the *Caruso* cannot be exploited with all servers or media. You may therefore find that in many cases not all the functions described in these instructions can be used.

Access to Media Content via the Main Menu (Home Menu)

□□□Main Menu (Home-Menu)

When you call up the Streaming Client by pressing the SCL button on the front panel or the remote control, the front panel screen displays a list of accessible media sources:

- USB
- Internet Radio
- UPnP-AV Server (Media server) in the local network *)
- Favorites



*) To play back media files that are stored on PC's or NAS storage devices on your home network, a UPnP-AV server software must be installed on these devices to make the media content accessible through the network.

Selecting and Playing Media Content

You can now select a device or a service using the ▲ / ▼ buttons. The selected list point is shown enlarged, and can be called up by pressing the ▶/OK button.

The content of the device is displayed in the form of a list. The individual list entries are followed either by a folder symbol ( ) or a note symbol (♫).

You can now again move to the individual list points using the ▲ / ▼ buttons, and open them with the ▶/OK button.

If the list entry you open is a folder, the screen displays the contents of the folder: you can now navigate further within the new folder.

If the entry is followed by a note symbol, this indicates that the content is playable (pieces of music, playlists, radio station etc.). If you open an entry of this type, its content will be played.

The lists and music tracks you can see when you select a device vary according to the machine and the transferred data.

Alpha-Search (Letter Search Function)

When you are navigating through lists you can call up the *Caruso* letter search function at any time by briefly pressing the ▲▼ button. The screen now displays the message 'Search _'. While this is on the screen, enter up to five letters or numerals using the remote control handset; the letters assigned to the numeric buttons are printed below the buttons. To obtain a particular letter, press the appropriate button repeatedly until the correct letter appears on the screen. Before entering the next character you have to wait until the cursor is displayed again. After pressing the OK button or after a brief delay with no further input the *Caruso* moves to the first entry in the list which starts with the characters you entered. If the text searched for is not found the best matching result will be shown. You can abort the search using the ■-button.

Selct Repeat functions ⮌

Repeated **brief presses** cycle through the repeat functions:

→ Rpt Trk (⮌ **1**), → Rpt All (⮌), →Normal

Rpt Trk	The current piece is repeated
Rpt All	All pieces in the current folder / the current playlist are repeated
Normal	Repeat function switched off

Long press: Switches ***Mix* mode** (Shuffle) ON and OFF

Subsequent brief button presses will cycle through the Mix Repeat operating modes:

→ Mix (⤮), → Rpt Trk (⮌ **1**), → Rpt Mix (⮌ ⤮)

In Mix mode the pieces are played in a random order.

Accessing Media Content using the Favourites List

The Favourites List

The Favourites list can be used to store your preferred Internet radio stations and the paths to your preferred music tracks. At any subsequent time you can then very quickly access these stations and tracks using the 'Favorites' entry in the Home Menu.

Adding Favourites to the List

If you are currently enjoying a particular Internet radio station, simply press the green ☺ button on the F100 / FM100 handset: this adds the station to the Favourites list.

ⓘ In principle you can also add pieces on a NAS server or a USB hard disc to your Favourites list, but we only recommend this if the content of the relevant storage medium is available at all times (e.g. permanently connected USB hard disc).

Calling up Favourites

Open the Favourites list using the ≣ button, then select an entry from the list using the ▲ / ▼ buttons. Start the track or the station by pressing the ▶ / OK button.

Erasing Favourites

Entries are removed from the Favourites list by first selecting the entry to be erased using the ▲ / ▼ buttons, and then holding the red ☹ button on the F100 / FM100 handset pressed in for several seconds.

⚠ **Caution!**

Erase the paths to files on USB hard discs or UPnP-AV servers from the Favourites list using the ☹ button before you erase or move files.

Using *Presets*

Preset function

You can store Internet radio stations as ***Presets*** using the process familiar from VHF radio. These stations can subsequently be called up directly using the numeric buttons on the F100 / FM100 remote control handset.

Storing a *Preset*

First select an Internet radio station (e.g. using the Home menu / Internet radio). When you hear the station, press the ⇥ button followed by a number 0 to 9. The station is now stored under this number.

It is possible to store a total of ten Presets under the numbers 0 to 9.

Calling up a *Preset*

Briefly press one of the numeric buttons 0 to 9. The associated Preset is now called up, and after a brief delay you will hear it.

ⓘ Presets are particularly useful when the front panel screen is not in view, but you wish to call up stations (e.g. when operating the system from an adjacent room, or when operating it via a domestic control system).

Adding Internet Radio Stations

The lists of Internet radio stations displayed by the *Caruso* are very complete and comprehensive, but since new stations are constantly being added you may find that one of your favourite stations is not (yet) included in the Select lists.

In this case you can add the stations using the vTuner service (see also the Chapter **'vTuner Premium Service'**). The station added can then be accessed from the *Caruso* main menu under the Internet Radio / Added Stations point.

Operating an iPod

You can connect an iPod to the *Caruso* by means of the iPod Docking Station which is built into the machine's top cover. Its basic functions can then be controlled using the buttons on the remote control handset or the front panel. While the iPod is in use, its integral screen provides information on the track currently playing, and the iPod's operating status.

When an iPod is inserted in the Dock, its battery is automatically recharged.

Selecting the iPod as source

Place your iPod in the iPod Docking Station and select the iPod as source by pressing the SCL button on the remote control handset or the front panel (you may have to press several times).

The iPod is now displayed on-screen as the source device.

The iPod as audio source

Information on the piece of music being played is displayed on the iPod's integral screen. We recommend that you leave the iPod's screen backlight switched on permanently to ensure that it is clearly legible.

The behaviour and method of operating the iPod are determined by the iPod itself. In general terms the function of the buttons of the *Caruso* or the F100 / FM100 remote control handset are as follows:

Start and pause playback
▶ / ⏯

The ▶ / ⏯ buttons on the remote control handset or the front panel are used to start and pause playback on the iPod (PLAY / PAUSE function).

Stop playback
■

Pressing the ■ button halts iPod playback and unloads the playlist.

Switch track
⏮ / ⏭

A brief press on the ⏮ / ⏭ buttons during playback causes the iPod to jump to the next or previous piece of music within the current playlist.

Search for a passage
◀◀ / ▶▶

The ◀◀ / ▶▶ buttons on the remote control handset can be used to search for a passage within the current piece of music (fast forward / rewind)

Select Repeat functions
⮌

A brief press on the ⮌ button on the remote control handset leafs through the iPod's various repeat functions in turn:
Icons on the iPod indicate the currently selected mode.

Select Shuffle functions
F1

A brief press on the F1 button on the remote control handset leafs through the iPod's random functions in turn.
Icons on the iPod indicate the currently selected mode.

Menu navigation

◀ Returns to previous point

▶ Confirms input

▲ Selects the previous point within a list

▼ Selects the next point within a list

OK Confirmation button when entering data

The iPod as video source

ⓘ In addition to playing music, certain iPod models may store video content, and in general terms the *Caruso* is capable of displaying this material on a screen connected to the system.

The method of controlling playback may differ slightly from model to model, and in some cases not all video functions are supported.

If you cannot access all the video functions of your iPod using the remote control handset, or if you only have remote control of the audio functions, then we recommend that you use the iPod's controls to operate the system.

iPod Dock

Using an iPod adapter

The iPod Dock is located in the top cover of the *Caruso*, and is sealed by a cover plate in its default state. If you wish to connect an iPod, please remove the cover plate by gently levering it up using a small pointed instrument such as a screwdriver; you will find a small recess in the plate where the screwdriver blade can be inserted.

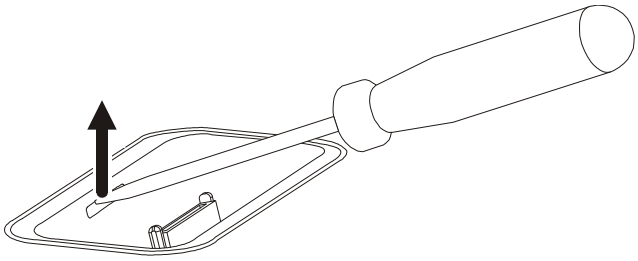
Locate the adapter which matches your iPod, and carefully place it in the well, front edge first. Engage the rear edge by gently pressing it down.

If you do not own a suitable adapter for your iPod, you can order the item from your local iPod Store or Apple dealer.

⚠ **Please do not use an adapter unless it is an exact match to your model of iPod.**
If the adapter does not fit properly (e.g. too large), the iPod will not be held securely in the mount, and there is a danger of bending or otherwise damaging the plinth.

Changing the adapter

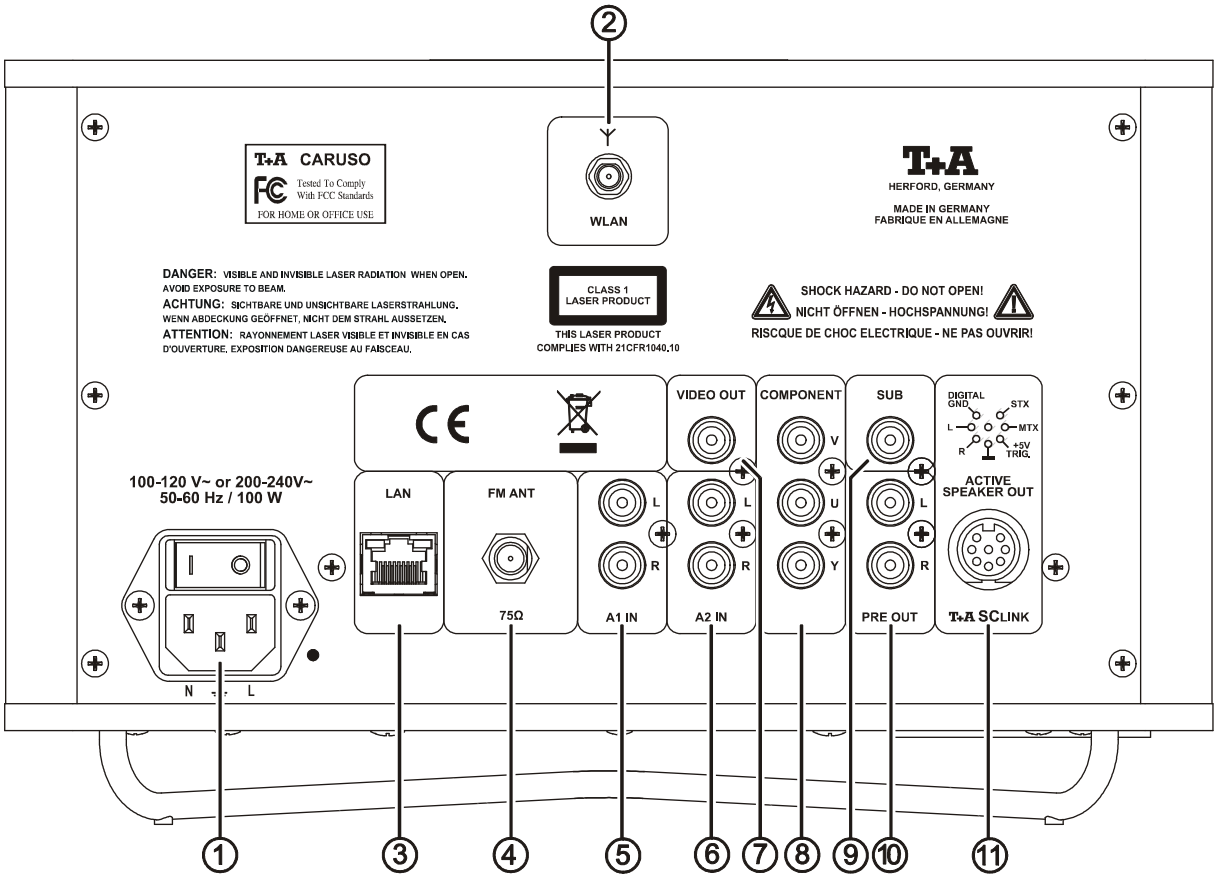
If you wish to replace an adapter which you have already fitted, you can lever the installed adapter out of the well in the Dock as shown in the drawing, and install a new one.



Installation
Using the system for the first time
Safety notes

This section describes all those matters which are of fundamental importance when setting up and first using the equipment. This information is not relevant in daily use, but you should nevertheless read and note it before using the equipment for the first time.

Connections



① Mains input and Mains switch

The mains lead is plugged into this socket.

For information on correct mains connections please refer to the notes in the Chapters '***Using the system for the first time***', '***Wiring***' and '***Safety Notes***'.

The mains input socket is fitted with a mains switch. If you do not intend to use the system for a long period, use this switch to isolate the machine from the mains supply.

To operate the *Caruso* the mains switch must be set to the position '1'.

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② WLAN

Aerial socket for receiving WLAN

The aerial can be unscrewed from the aerial base, and screwed directly into the socket.

Automatic activation of the WLAN module

Every time you switch the *Caruso* on, it first checks whether it is connected to a wired Ethernet or Powerline network via its LAN socket (see below).

If it finds no connection to a wired network, the *Caruso* activates its WLAN module, and attempts to make a connection to a wireless network.

Caution!

If you use WLAN, the LAN socket must be left vacant.

---

③ LAN

Router socket

If LAN is connected, the LAN connection has priority, and WLAN is automatically disabled.

---

④ FM ANT (Aerial input)

The *Caruso* features a 75 Ω aerial input marked **FM ANT** which is suitable for a cable connection as well as a standard domestic radio aerial. For first-class reception quality a high-performance aerial system, competently installed, is a fundamental necessity.

⑤ **A1 IN**	Universal analogue stereo sound input
⑥ **A2 IN**	Universal analogue stereo sound input If you wish to connect a television to the *Caruso*, please use this input.
⑦ **VIDEO OUT**	Output socket for connecting a video monitor with Composite (FBAS) signal input.
⑧ **COMPONENT**	Component Video output for connecting a video monitor, which must feature a corresponding component input. The output can supply standard or progressive video signals; progressive video signals deliver better picture quality. In this case the monitor must be able to process progressive input signals. The output signal can be set to standard or progressive signals in the Disc Player's set-up menu (see Chapter **'DVD Player Setup Menu'**).
⑨ **SUB**	Output socket for an active sub-woofer. The use of a sub-woofer is optional. ⓘ If a sub-woofer is connected, it must be switched on in the Loudspeaker menu (see Chapter **'System Settings, Loudspeaker'**). ⚠ If **no** sub-woofer is present, it is essential to disable the sub-woofer (setting **'ext. Subwoofer off'**) in the Loudspeaker menu (see Chapter **'System Settings, Loudspeaker'**). If the sub-woofer is not disabled in the Loudspeaker menu (see Chapter **'System Settings, Loudspeaker'**) but no sub-woofer is connected, the low-frequency part of the sound will be absent when music is played.
⑩ **PRE OUT**	Socket for external active loudspeakers (e.g. **T+A** *CM Active*) ⓘ **T+A** *CM Active*-loudspeakers can be switched on automatically by the *Caruso*. This is possible because the *Caruso* generates a Trigger control voltage, which must be activated in the Loudspeaker menu (see Chapter **'System Settings, Loudspeaker'**). Other types of loudspeaker connected to these sockets should be fitted with an automatic power-on circuit. If not, you will have to switch them on and off manually.
⑪ **T+A SCLINK**	Socket for connecting **T+A** Talis series active loudspeakers, or active **T+A** sub-woofers with an **SCLINK** input socket. The TALIS speakers and sub-woofer are switched on and off automatically via the **SCLINK** control signals. The **SCLINK** socket can also be used for software updates to the *Caruso*.

Installation and wiring

Carefully unpack the *Caruso* and store the original packing materials carefully. The carton and packing are specially designed for this unit and will be needed again if you wish to move the equipment at any time.

Please be sure to read the safety notes in these instructions.

If the unit gets very cold (e. g. when being transported), condensation may form inside it. Please do not switch it on until it has had plenty of time to warm up to room temperature, so that any condensation evaporates completely.

Before placing the unit on a sensitive surface, please check the compatibility of the lacquer and the unit's feet at a non-visible point.

The unit should be placed on a rigid, level base.

The quality and characteristics of the base on which your high-quality Hi-Fi equipment stands define the limits of sound quality which can be achieved. The base surface should be as heavy, rigid, hard and level as possible. Make sure there are no loose objects on the support surface which could cause rattling noises or resonance effects.

The receiver should be set up in a dry, well-ventilated site, out of direct sunlight and away from radiators.

The unit must not be located close to heat-producing objects or devices, or anything which is heat-sensitive or highly inflammable.

When installing the unit on a shelf or in a cupboard it is essential to provide an adequate flow of cooling air, to ensure that the heat produced by the unit is dissipated effectively. Any heat build-up will shorten the life of the unit and could be a source of danger. Be sure to leave at least 10 cm free space above the unit for ventilation. If the system components are to be stacked then the amplifier must be the top unit. Do not place any object on the top cover.

Mains and loudspeaker cables, and also remote control leads must be kept as far away as possible from signal leads and antenna cables. Never run them over or under the unit.

A complete connection diagram is shown in **'*Appendix A*'**.

Notes on connections:

- Be sure to push all plugs firmly into their sockets. Loose connections can cause hum and other unwanted noises.
- When you connect the input sockets of the amplifier to the output sockets on the source devices always connect like to like, i. e. **'R'** to **'R'** and **'L'** to **'L'**. If you fail to heed this then the stereo channels will be reversed.
- To achieve maximum possible interference rejection the mains plug should be connected to the mains socket in such a way that phase is connected to the mains socket contact marked with a dot (●). The phase of the mains socket can be determined using a special meter. If you are not sure about this, please ask your specialist dealer.

We recommend the use of the **T+A 'POWER LINE'** ready-to-use mains lead in conjunction with the **'POWER BAR'** mains distribution panel, which is fitted with a phase indicator as standard.

When you have completed the wiring of the system please set the volume control to a very low level before switching the system on.

The screen on the *Caruso* should now light up, and the unit should respond to the controls.

If you encounter problems when setting up and using the amplifier for the first time please remember that the cause is often simple, and equally simple to eliminate. Please refer to the section of these instructions entitled **'*Trouble shooting*'**.

Loudspeaker and signal cables

Loudspeaker cables and signal cables (inter-connects) have a significant influence on the overall reproduction quality of your sound system, and their importance should not be under-estimated. For this reason **T+A** recommends the use of high-quality cables and connectors.

Our accessory range includes a series of excellent cables and connectors whose properties are carefully matched to our speakers and electronic units, and which harmonise outstandingly well with them.

For difficult and cramped situations the **T+A** range also includes special-length cables and special-purpose connectors (e. g. right-angled versions) which can be used to solve almost any problem concerning connections and system location.

Mains cables and mains filters

The mains power supply provides the energy which your sound system equipment needs, but it also tends to carry interference from remote devices such as radio and computer systems.

Our accessory range includes the specially shielded **'POWER FOUR'** mains cable, ready-to-use **'POWER LINE'** mains cable with integrated shell-type filters and the **'POWER BAR'** mains filter distribution board which prevent electro-magnetic interference from entering your Hi-Fi system. The reproduction quality of our systems can often be further improved by using these items.

If you have any questions regarding cabling please refer to your specialist **T+A** dealer who will gladly give you comprehensive expert advice without obligation. We would also be happy to send you our comprehensive information pack on this subject.

Changing the batteries

The battery compartment can be opened by pressing in the locking surface and sliding the cover down and off. Remove the old cells and fit two new dry cells of the **LR 03 (MICRO)** type in the battery compartment, taking care to fit them with correct polarity. Please remember that **all the cells must be replaced** at the same time.

Caution!
Batteries shout not be exposed to excessive heat like sunshine, fire or the like.

Disposing of exhausted batteries:

Exhausted batteries must never be thrown into the household waste! They should be returned to the battery vendor (specialist dealer) or your local toxic waste collection point, so that they can be recycled or disposed in a proper way. Most local authorities provide collection centres for such waste, and some provide pick-up vehicles for old batteries.

Care of the unit:

Always disconnect the unit from the mains supply before cleaning it.

The surfaces of the case should be wiped clean with a soft, dry cloth only.

Never use solvent-based or abrasive cleaners!

Before switching the unit on again, check that there are no short-circuits at the connections, and that all cables are plugged in correctly.

Safety notes

All the components in this device fulfil the currently valid German and European safety norms and standards.

We ensure that our products are of consistently high quality, and meet all specifications, by checking all materials rigorously for quality, using meticulous production methods and subjecting each unit to a fully automatic computer-controlled final inspection.

For your own safety please consider it essential to read these operating instructions right through, and observe in particular the notes regarding setting up, operation and safety.

Installation

The unit must be set up in such a way that none of the connections can be touched directly (especially by children). Be sure to observe the notes and information in the section **'*Installation and Wiring*'**.

Power supply

The power supply required for this unit is printed on the mains supply socket. The unit must never be connected to a power supply which does not meet these specifications. If the unit is not to be used for a long period disconnect it from the mains supply at the wall socket.

Mains leads / Mains plug

Mains leads must be deployed in such a way that there is no danger of damage to them (e. g. through persons treading on them or from furniture). Take particular care with plugs, distribution panels and connections at the device.

Unplugging the mains plug will disconnect the device from the mains for service and repair. Please make sure that the mains plug is easily accessible.

Enclosure openings

Liquid or particles must never be allowed to get inside the unit through the ventilation slots. Mains voltage is present inside the unit, and any electric shock could cause serious injury or death. Never exert undue force on mains connectors.

Protect the unit from drips and splashes of water; never place flower vases or fluid containers on the unit.

Supervision of device operation

Like any other electrical appliance this device should never be used without proper supervision. Take care to keep the unit out of the reach of small children.

Service, Damage

The case should only be opened by a qualified specialist technician. Repairs and fuse replacements should be entrusted to an authorised **T+A** specialist workshop. With the exception of the connections and measures described in these instructions, no work of any kind may be carried out on the device by unqualified persons.

If the unit is damaged, or if you suspect that it is not functioning correctly, immediately disconnect the mains plug at the wall socket, and ask an authorised **T+A** specialist workshop to check it.

Over voltage

The unit may be damaged by excess voltage in the power supply, the *mains circuit* or in aerial systems, as may occur during thunderstorms (lightning strikes) or due to static discharges.

Special power supply units and excess voltage protectors such as the **T+A 'Power Bar'** mains distribution panel offer some degree of protection from damage to equipment due to the hazards described above.

However, if you require absolute security from damage due to excess voltage, the only solution is to disconnect the unit from the mains power supply and any aerial systems.

To avoid the risk of damage by overvoltages we recommend to disconnect all cables from this device and your HiFi system during thunderstorms.

All mains power supply and aerial systems to which the unit is connected must meet all applicable safety regulations and must be installed by an approved electrical installer.

ⓘ Many insurance companies offer lightning damage insurance for electrical equipment as part of their household insurance service.

Approved usage

This device is designed exclusively for reproducing sound and/or pictures in the domestic environment. It is to be used in a dry indoor room which meets all the recommendations stated in these instructions.

Where the equipment is to be used for other purposes, especially in the medical field or any field in which safety is an issue, it is essential to establish the unit's suitability for this purpose with the manufacturer, and to obtain prior written approval for this usage.

T+A equipment which includes a radio or television receiving section must be operated within the stipulations laid down by the Post Office and the Telecommunications authorities in the country in which it is used.

This unit may only be used to receive or reproduce those transmissions which are intended for public reception. The reception or reproduction of other transmissions (e. g. police radio or mobile radio broadcasts) is prohibited.

Approval and conformity with EC directives

In its original condition the unit meets all currently valid European regulations. It is approved for use as stipulated within the EC.

By attaching the CE symbol to the unit **T+A** declares its conformity with the EC directives 2006/95/EC and 2004/108/EC and the national laws based on those directives.

The original, unaltered factory serial number must be present on the outside of the unit and must be clearly legible! The serial number is a constituent part of our conformity declaration and therefore of the approval for operation of the device.

The serial numbers on the unit and in the original **T+A** documentation supplied with it (in particular the inspection and guarantee certificates), must not be removed or modified, and must correspond.

Infringing any of these conditions invalidates **T+A** conformity and approval, and the unit may not be operated within the EC. Improper use of the equipment makes the user liable to penalty under current EC and national laws.

Any modifications or repairs to the unit, or any other intervention by a workshop or other third party not authorised by **T+A**, invalidates the approval and operational permit for the equipment.

Only genuine **T+A** accessories may be connected to the unit, or such auxiliary devices which are themselves approved and fulfil all currently valid legal requirements.

When used in conjunction with auxiliary devices or as part of a system this unit may only be used for the purposes stated in the section **'*Approved usage*'**.

Disposing of this product

The only permissible method of disposing of this product is to take it to your local collection centre for electrical waste.

FCC Information to the user

Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

(for use in the United States of America only)

Class B digital device – instructions:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different form that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Network Configuration

General Information

The *Caruso* can be operated in wired LAN networks (*Ethernet LAN* or *Powerline LAN*) or in wireless networks (*WLAN*).

If you wish to use your *Caruso* in your home network, you must first enter the necessary network settings on the *Caruso*. This includes entering the network parameters such as the IP address etc. both for wired and wireless operation. If you wish to use a wireless connection, a number of additional settings for the WLAN network also have to be entered.

Please refer to the Chapter **'Glossary** / **Additional Information' and 'Network Terms'** for additional explanations of terminology relating to network technology.

In the following sections we assume that a working home network (cable network of WLAN network) **with router and (DSL) Internet access is present.**
If you are unclear about some aspect of installing, setting up and configuring your network, please address your queries to your network administrator or a network specialist.

Compatible hardware and UPnP servers

The marketplace offers a vast number of routers, NAS devices and USB hard discs made by a very wide range of manufacturers. **T+A** equipment is generally compatible with other makes of machine which bear the UPnP label. A list of devices which **T+A** has checked for compatibility can be found on the Internet at: http://www.taelektroakustik.de/hardware/comp_lan_hw.pdf.

Network Configuration Menu

All network settings are entered in the Network Configuration menu. This menu will vary slightly in appearance depending on the type of your network, i.e. whether you have a wired (LAN) or wireless (WLAN) network.
If the *Caruso* detects a LAN connection to a network when you switch it on, the machine will assume that this is to be used, and displays the network configuration menu for LAN networks.
If no LAN network is connected, the *Caruso* activates its WLAN module and displays the WLAN configuration menu when you call up the configuration menu. The menu for a WLAN network includes a number of additional menu points. The following sections explain how to use the menu, and the meaning of the individual menu points.

Opening the Network Configuration Menu

First select the *Caruso* Streaming Client function by pressing the SCL button. Open the configuration menu with a long press on the SRC button on the F100 / FM100 remote control handset. You should now see the configuration menu on the front panel screen.

Operating the Menu, Changing and Storing IP Addresses

Use the ▲ / ▼ buttons in the menu to select the network parameter to be changed, and activate the entry with the OK button.

You can now change the setting using the following buttons, depending on the type of setting:

◀ / ▶ button	for simple selection (ON / OFF)
Numeric buttons 0 to 9	for entering IP addresses
Alpha-numeric input	for entering text

When the setting process is complete, or when you have entered the complete address, press the OK button to confirm your action.

Alpha-numeric entry

At certain points, e.g. for entering server names or passwords, it is necessary to input series of characters (strings). At such points you can enter letters, numbers and special characters by repeatedly pressing the numeric buttons on the F100 / FM100 remote control handset, as when writing SMS news. The assignment of letters to the buttons is printed below the buttons. Special characters can be accessed using the 0 and 1 buttons:

0	␣ 0 + - * / ^ = { } ( ) [ ] < >
1	. , ? ! : ; 1 \ " ' _ @ $ % & # ~

Use the blue ▲▼ button for toggling between numbers, capitals and lowercase letters. The bottom line of the screen shows which input mode is currently selected.

ⓘ At certain points (e.g. DNS server name) it is possible to enter both an alpha-numeric string and an IP address. At these points an IP address should be entered like a string (with separating dots as special characters). In this case an automatic check for valid address ranges (0 … 255) is not carried out.

Closing the Menu

Once you have correctly set all the parameters, select the menu point **'Save and Restart'**, then press the OK button. This action causes the *Caruso* to accept the settings, and the machine restarts with the new network settings. After the restart you should see the available network media sources (Internet radio, UPnP-AV server, etc.) displayed in the main menu.

Interrupting the Menu without Storing the Settings

At any time you can leave the network configuration menu without making any changes to the network settings: this is done by pressing the ■ button, which takes you to the menu point **'Exit without saving'**. Pressing the OK button at this juncture interrupts and closes the menu.

The Configuration for a Wired Ethernet LAN or Power-Line LAN connection

Setting the Parameters for a Wired Network

- Connect the *Caruso* to an operational network or Power-Line modem using the LAN socket on the back panel.
- Switch the *Caruso* on, and select the Streaming Client function by pressing the SCL button.
- Call up the Configuration menu as described above. You should now see the menu reproduced below, displaying the network parameters. In the title line the message **'LAN'** should appear, indicating that the machine is connected to a wired LAN. If you see **'WLAN'** at this point instead, please check your network connection, and ensure that the network is switched on and operational.
- You can now select the individual menu points and adjust them to match your network conditions. The illustration below shows the possible button inputs after each menu point..

Network Parameter (LAN)		Possible entries
→ MAC	00:0e:9b:cc:a4:35	none
DHCP	Off	◄ / ►
Device IP	192.168.0.10	(0 ... 9)
IP mask	255.255.255.0	(0 ... 9)
Gateway	192.168.0.1	(0 ... 9)
DNS 1	192.168.0.1	(0 ... 9, A ... Z)
DNS 2	0.0.0.0	(0 ... 9, A ... Z)
Proxy	XXX	◄ / ►
Proxy IP	192.168.0.1	(0 ... 9, A ... Z)
Proxy port	8080	(0 ... 9)
Dev. Name	XXXXX	(0 ... 9, A ... Z)
Save	Apply	OK
Exit	Apply	OK

◄ / ►: Switching ON / OFF
(0...9): Numeric input, separating dots are automatically generated; input limited to valid addresses
(0...9, A...Z): Alpha-numeric input and special characters.
IP - separating dots must be entered as special characters.

The parameters illustrated above are only typical values.
Addresses and settings may require different values for your network.

Menu Point	Description
MAC	The MAC address is a hardware address which uniquely identifies your machine. The address displayed is determined by the manufacturer, and cannot be altered.
DHCP	**ON** If your network includes a DHCP server, please select the ON setting at this point. In this mode an IP address is automatically assigned to the **Music Player** by the router. The screen shows only the MAC address and the message DHCP state ON. In this case the address input fields shown in the illustration do not appear in the menu. **OFF** If your network does not include a DHCP server, please select the OFF setting. In this mode you must configure the following network settings manually. Please ask your network administrator for the addresses to be entered for your network.
Device IP	IP address of the **Music Player**
IP mask	Network mask
Gateway IP	IP address of the router
DNS 1	Name / IP of the name server (optional)
DNS 2	Alternative name server (optional)
Proxy state	**ON** if a proxy server is present, otherwise **OFF**
Proxy IP	Address of the proxy server
Proxy port	Port number of the proxy server
Dev. Name	User-selected name under which the device appears in the network
Save and Restart	Stores the network parameters, and restarts the **Music Player** with the new settings.
Exit without saving	Closes the menu: data already entered is discarded.

The Configuration for a WLAN connection

Setting the Parameters for a Radio Network

- Connect the WLAN aerial (supplied) to the *Caruso* WLAN aerial socket, and ensure that no cable is attached to the *Caruso* LAN socket.
- Switch the *Caruso* on, and select the Streaming Client function by pressing the SCL button.
- Now call up the Configuration menu as described above: with a long press on the SRC button. You should now see the menu reproduced below, displaying the network parameters.

Network Parameter (WLAN)	
→ MAC	00:0e:9b:cc:a4:35
WLAN	Configuration
DHCP	Off
Device IP	192.168.0.10
IP mask	255.255.255.0
Gateway	192.168.0.1
DNS 1	192.168.0.1
DNS 2	0.0.0.0
Proxy	XXX
Proxy IP	192.168.0.1
Proxy port	8080
Dev. Name	XXXXX
Save	Apply
Exit	Apply

Searching for and Selecting the Network

First select the menu point **'WLAN configuration start'**, and activate it by pressing the OK button.
A menu appears showing these points:
- Rescan - initiates new search for accessible radio networks
- Set manually - adding a WLAN manually

After a brief delay the networks present in the vicinity are listed on the screen.

List of WLANs
→ Rescan
Set manually
XXXXX (name of network)
(1/3)

You can use the 'Rescan' function to start a new search for networks present in the vicinity.
Please select one of the networks located, and activate it by pressing the OK button.

Entering the Password (for encoded networks)

WLAN	
→ Passphrase	.....
Save	Apply
(1/2)	

If your network is encoded, the window illustrated above now appears. Please enter the network password and confirm the entry by pressing OK. Now select the point 'Save WLAN settings' and confirm with OK.

If a WEP code is used, the password must be entered as a hexadecimal code (0 - 9, A - F).

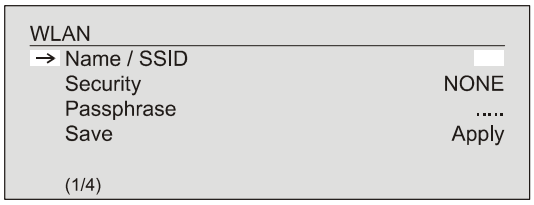
Please enter the settings for the remaining network parameters as described earlier in the section entitled **'Setting the Parameters for a Wired Network'**.

Storing Network Settings and Restarting

Finally select the menu point 'Save and Restart', and press the OK button; this action accepts the settings, and restarts the *Caruso* with the new settings.

Special case:
Manual Network Entry

The *Caruso* automatically searches for accessible radio networks, and lists them when you call up the menu point 'WLAN Configuration'. However, the *Caruso* can only locate networks which broadcast their SSID network identity. For security reasons many radio networks do not transmit the SSID (if you are not sure about this, ask your network administrator). In such cases the network cannot be found and displayed automatically, i.e. it must be set up manually. This is the purpose of the menu point 'Set Manually'. If you select this menu point, you will see the input window reproduced below; you can enter the parameters for your network at this point.



After successfully entering all the data, please select the point 'Save WLAN Settings', and confirm by pressing the OK button. Your *Caruso* now accepts the data you have entered relating to the WLAN network, and moves on to the subordinate menu in which you can set the remaining network parameters, as described earlier in the section entitled **'Setting the Parameters for a Wired Network'**.

You can now leave the Configuration menu by selecting the menu point 'Save and restart'.

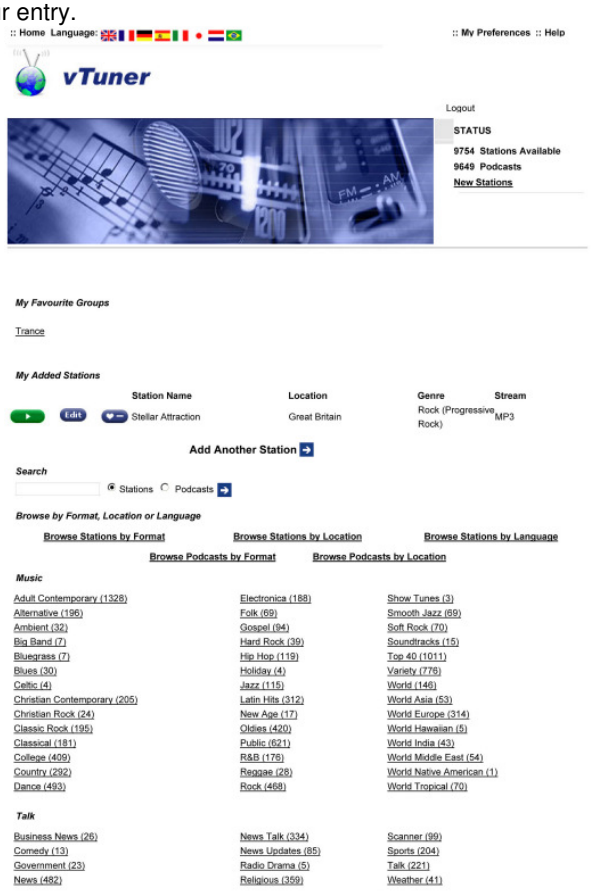
The vTuner Premium Service

The list of radio stations displayed by your *Caruso* is prepared by an Internet Service Provider, and transferred to your machine by data transfer. You can expand and edit the 'Favourite Groups' and 'Added Stations' list to suit your preferences via the Internet portal of your service provider, using the main menu point 'Internet Radio'. This is the procedure:

Open your Internet browser and call up the following web address:
http://ta.vtuner.com

The first time you register you should enter the MAC address of your *Caruso*; the MAC address provides unique identification of your machine. The MAC address can be found in the Configuration menu (hold the SRC button pressed in), and consists of six pairs of characters, e.g.: 00:0e:9b:cc:a4:35. You do not need to enter the separating colons when you enter this data. MAC addresses are in hexadecimal format, i.e. the address consists only of the letters a to f, and the numbers 0 to 9.

Confirm your entry.



You must register with vTuner in order to be able to use the service; you can register via your e-Mail address and a password. Please follow the instructions stated by the service provider.

Now you can select radio stations from the comprehensive inventory provided by vTuner, and store them in lists. The lists are transferred to your *Caruso* automatically via your Internet connection. Shortly after you have edited lists on the vTuner page, or stored new stations, you will find that they are available on your *Caruso*.

Notes regarding Internet Radio:

- Not all stations are always accessible
  - Not all stations transmit 24 hours
  - Stations are no longer accessible
  - Capacity exhausted
- Transmission breaks off
  - (Internet) network problems
  - Server capacity exhausted

Setting up new Internet Radio Stations

On the vTuner Internet site you can also set up new stations which are not (yet) included in the Select lists. This is accomplished by registering with vTuner and logging on. Click on the point 'My Added Stations'. An input mask appears in which you can enter the data for your station. After a brief period you will be able to access the newly set-up station via the menu system of your *Caruso*. You will find the station under Internet Radio / Added Stations.

Finding a Station URL

You require the URL (Internet address) of any radio station you wish to set up on the vTuner service. You will generally find the URL on the station's website.
Another method of finding the URL is to search for it using an Internet searching service such as Shoutcast (www.shoutcast.com). Once you have found your station, click on the 'Tune In' switch: this will normally open your media player, and the station should play. In most cases you can set Media Player to display the 'Streaming Properties'. For example, using the popular Winamp Player, simply right-click on the entry for the currently playing station in the player's Playlist window. A menu now opens, and clicking on the point 'View File Info' opens an information box which displays the streaming properties including the URL.

Trouble shooting

Many problems have a simple cause and a correspondingly simple solution. The following section describes a few difficulties you may encounter, and the measures you need to take to cure them. If you find it impossible to solve a problem with the help of these notes please disconnect the unit from the mains and ask your authorised **T+A** specialist dealer for advice.

Machine does not switch on (green LED does not light up)	**Cause 1:** Mains lead not plugged in correctly. **Remedy:** Check connection, push connector in firmly.
	Cause 2: Mains fuse burned out. **Remedy:** Have the mains fuse replaced by an authorised specialist workshop. The rating of the replacement fuse must agree with the specification printed on the unit.
Machine responds correctly to manual operation of the buttons, but can not be controlled by IR remote control.	**Cause 1:** Incorrectly inserted batteries or flat batteries in the remote control handset. **Remedy:** Re-install batteries correctly or fit new ones.
	Cause 2: The remote control transmitter has no direct line-of-sight with the unit. **Remedy:** Make sure that the remote control transmitter has direct line-of-sight contact with the receiver - note that glass doors can interrupt the connection. Maximum range between transmitter and receiver: approx. 8 metres. Be sure to position the receiver where it is not subjected to direct sunlight or very bright artificial light. Fluorescent tubes and energy-saving lamps are powerful sources of interference.

Streaming Client

The streaming client can not connect to a network. **On the display the indication** **'SCL Connecting...'** **is displayed.**	**Cause 1 (cable LAN):** Network cable not properly connected **Remedy:** Connect network cable, check connection to router
	Cause 2 (wireless LAN): WLAN antenna not connected or placed in a location with bad reception quality **Remedy:** Connect WLAN antenna properly and find a location with good reception quality. Set the transmission power output of your WLAN router to maximum. Try to establish a network connection first in a location close to the WLAN router. If this succeeded try to connect to WLAN from a more remote location. Experiment with antenna position and try to find a location with better reception quality.
	Cause 3 (wireless LAN): WLAN reception qualiy bad (low field strength). Possibly too much attenuated by walls/ceilings on the transmission path. **Remedy:** Optimize location of receiver and transmitter antennas. **Alternative:** If transmission problems persist a so called ‚Power Line' network might be good alternative to establish a good and stable network connection. The best, safest and most secure network however will always be a cable LAN network.
	Cause 4: Netzwork parameters not properly configured. **Remedy:** Configure the network parameters correctly (see chapter **'Network configuration'**).
	Cause 5 (operation without network connection): For proper operation the *Caruso* needs at least one properly connected network device. This can be a LAN or WLAN network or a USB storage device. **Remedy:** If the *Caruso* shall be operated without network (LAN / WLAN) please connect at least a USB stick.
The message **'Track not found'** **is displayd**	**Cause:** The music file on the storage device or on the music server was deleted or the internet radio station is not available at the moment. **Remedy:** Choose an other music title or radio station. If the station or title is not available any more it should be deleted from the Favourites List (if stored there).
The message **'Format Error'** **is displayed**	**Cause:** The title is stored / the radio station is transmitting in a format that can not be decoded by the *Caruso*. **Remedy:** Choose an other title or station.
The message **'network problems – restarting'** **is displayed**	**Cause:** Network problems in your home network or on the internet occurred; the connection was interrupted. **Remedy:** When encountering a network problem or interruption the *Caruso* will re-start the network communication. After re-start please choose a music title or internet radio station and start playback.

Transmission interruptions occur when listening to internet radio stations.	**Cause 1:** The capacity of the internet radio station‘s server is at it‘s limit. **Remedy:** Choose a different station.
	Cause 2: Network problems occurred. **Remedy:** Check your netwerk (see above).
Some internet radio stations can not be received	**Cause:** The internet radio station has been switched off, it transmits only at certain hours of the day or it has changed ist internet address. **Remedy:** Try to get information from the website of the station regarding transmission hours ans internet address (URL). Try to establish a connection to the station at a later time.
Bad sound quality bei certain internet radio stations	**Cause:** The station transmits with a low audio bandwidth (low bitrate). **Remedy:** Use stations transmitting at least at 128 kBit/s. This is the lowes recommended bitrate for adequate sound quality. For good sound quality we recommend high bitrates like 320 kBit/s
USB Storage device is not recognised	**Cause 1:** The storage device (especially USB hard discs without separate power supply) draws more electrical current from the USB interface than is permitted by the USB standard. **Remedy:** Only use USB storage devices that conform to the USB standard or use storage devices with own power supplies.
	Cause 2: The storage device is not formatted with an appropriate file system. **Remedy:** The *Caruso* accepts storage devices with FAT16 or FAT32 file systems. **Note:** For big music archives we recommend to use a NAS (network attached storage) device with a UPnP-AV server to which the *Caruso* will connect via your home network.

NETWORK TERMINOLOGY

General information

The Switch ensures that the individual components within a network are connected correctly. This is only possible if it can identify each device within the network unambiguously; this is the reason why every component is assigned a form of “house number” (IP address). The IP address consists of four blocks of digits with numbers in the range 0 to 255, separated by dots (e.g. 192.168.1.1).

Each of the individual number blocks may contain values between 1 and 254 (the values 0 and 255 are reserved for certain special functions, and should therefore not be used). However, if the network is to operate reliably, the network owner should only select addresses designed for home network use - i.e.: the first two number blocks should always be 192.168.xxx.xxx; the third block can be selected without restriction within the above limits (but should be the same for all devices on the network), and the fourth block must distinguish each device uniquely (e.g.: *Caruso* **r** 192.168.001.001, NAS: 192.186.001.002, PC: 192.168.001.003, ...).

If this local network is to include Internet music sources (Internet radio) as well as physical devices, then the **T+A** *Caruso* must have access to the Internet. This facility is provided by a device such as a router with connection to the DSL network. This router is also a constituent part of the network, and is assigned its own IP address. The **T+A** *Caruso* must also be informed of the address of the router (Gateway) to enable it to gain access to the outside world.

ⓘ Please ensure that the first three blocks of the Device IP, Gateway IP and DNS 1 share the same address space (e.g. 192.168.0.xxx). The fourth block assigns a unique address (house number) to the components in the local network. This number must not be present more than once in the local network.
The Device IP mask should always be assigned the address 255.255.255.0.

DNS

The Domain Name System (DNS) is one of the most important services on the Internet. Its primary task is to convert “Internet addresses”, such as www.taelektroakustik.de, into the associated IP address. In most home networks the router carries out the DNS function.
If you decide to configure your network manually (without DHCP), then simply enter the address of your router as the DNS address when configuring the network.

Ethernet-LAN

Wired network. Interference-free network technology, with the drawback of having to deploy a network cable.

Gateway

The computer or router in your network which is responsible for managing data traffic between your home network and the outside world (i.e. the Internet).

Client

Network device which obtains data from the network, decodes it and converts it into, for example, analogue music signals which can then be reproduced via an amplifier and loudspeakers. Streaming Clients also contain functions for displaying media content, and for navigating on the Internet or servers.

DHCP

DHCP is an abbreviation of **D**ynamic **H**ost **C**onfiguration **P**rotocol. The primary purpose of DHCP is to enable Clients to obtain your network configuration automatically from a server or router.

IP-Adresse

Network address. Each device in the network requires an IP address at which it can be accessed, and by which it is unambiguously identifiable. No individual network address may be present more than once. This is important if you are entering network addresses manually. If the addresses in your network are assigned by DHCP, you do not need to worry about IP addresses at all, as the DHCP server manages the addresses automatically without your intervention.

NAS
(Network Attached Storage)

Network storage facility. This is generally a very large-capacity (> 200 GB) storage device to which other devices have access. If the NAS server includes a UPnP-AV server service, then the *Caruso* has access to media files stored on the NAS, and can play them back.

Powerline-LAN

In a Power-Line LAN data is transferred via the existing mains power cabling. Devices known as “Power-Line modems” are required at the transmitting and receiving end. In most cases Power-Line offers relatively problem-free data transfer with adequate data rates for audio streaming. We recommend Power-Line modems with bit rates of 85 or 200 Mbit/s.

Proxy server

A Proxy or Proxy server is a computer in the network which is capable of carrying out data transfers faster and more efficiently, and can increase security through the use of access control mechanisms. Most home networks do not include a proxy server. In this case there is no need to enter a Proxy address when configuring the *Caruso* network.

Router

Central network device which creates and manages the connections between the network devices. In most networks the router also assumes the function of Gateway to the outside world.

Server

Network device which provides data and services for other devices in the network. For example, a UPnP-AV server typically stores audio / video data, and makes it available to other devices (the Streaming Clients). Many UPnP-AV servers also offer functions such as cataloguing, and easy identification of media content using criteria such as artiste, album name, genre, etc.

UPnP-AV

Network protocol that makes media files available on the home network.

On PCs and NAS storage devices a UPnP-AV server software must be installed to enable the *Caruso* to access media files stored on these devices.

Examples for UPnP-AV server software compatible with the *Caruso*:

Windows:

- **Twonky Media Server**
  http://www.twonkyvision.de/
- **Windows Media Player 11**
  http://www.microsoft.com/windows/windowsmedia/de/default.aspx

Linux:

- **Mediatomb**
  http://mediatomb.cc/
- **GmediaServer**
  http://www.gnu.org/software/gmediaserver/

WLAN
(also W-LAN, Wireless LAN)

Radio network. The network is connected by means of radio waves operating in the 2.4 GHz frequency band. Radio networks are easy to install as no cables have to be deployed, but they are often problematic and unreliable - especially when the transmission distances are substantial. Power-Line networks, which can also be installed without separate cabling, are a better choice in many situations. In every case the deployment of a network cable is the most reliable and problem-free technology for data transfer.

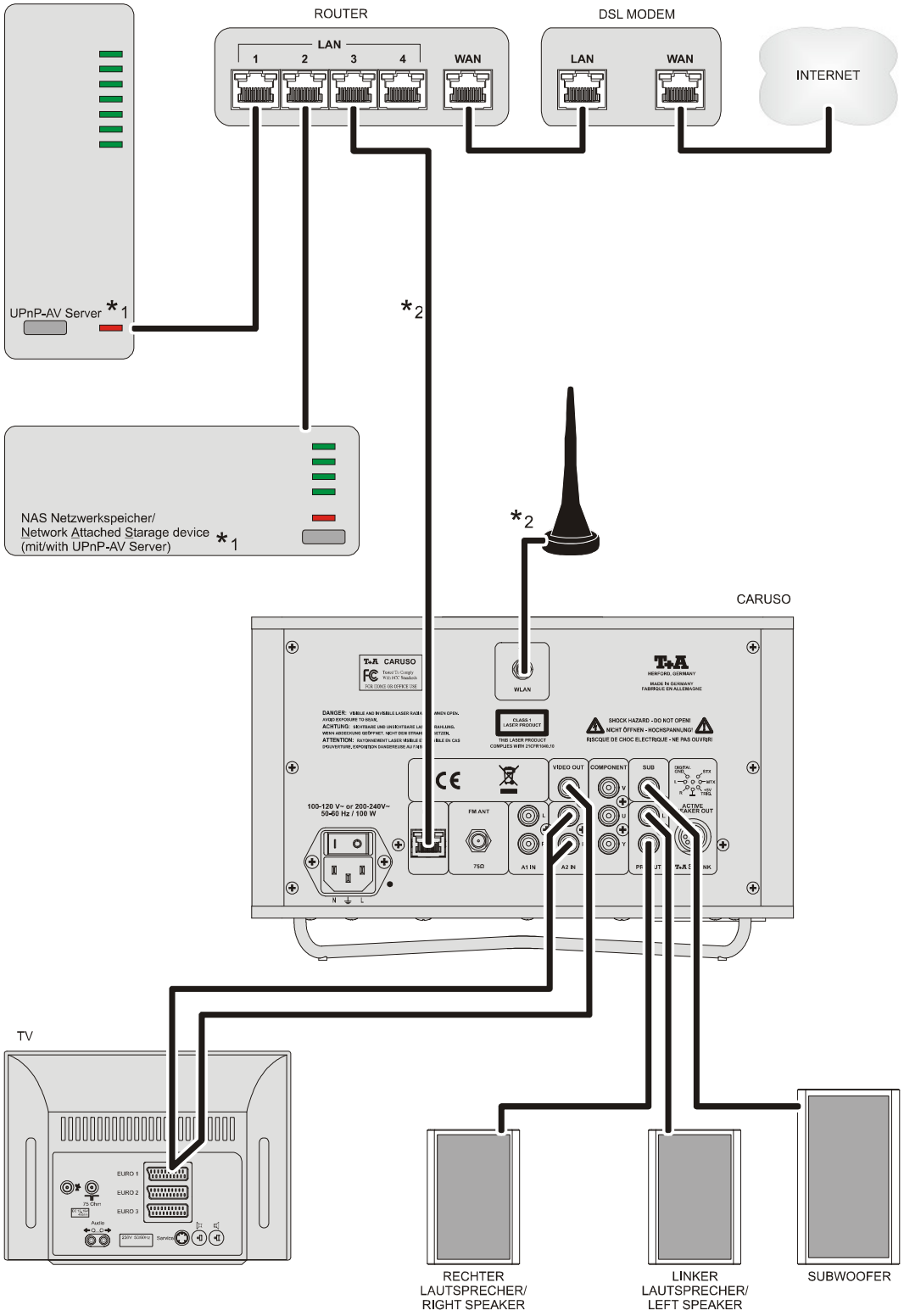
Compatible hardware and UPnP servers

The marketplace offers a vast number of routers, NAS devices and USB hard discs made by a very wide range of manufacturers. **T+A** equipment is generally compatible with other makes of machine which bear the UPnP label. A list of devices which **T+A** has checked for compatibility can be found on the Internet at: http://www.taelektroakustik.de/hardware/comp_lan_hw.pdf.

Anhang
Appendix

Anhang / Appendix A

Anschluss-Schema / Wiring diagram



Attention!

A properly set up home network with router must be installed and in operation to use the **Music Player**.
For the use of internet radio a DSL access to the internet is needed.

For questions regarding setting up your network and internet connection please ask your system administrator or any network specialist.

*1 Musik Server with UPnP-AV server software installed
*2 Connection either via Cable-LAN oder Wireless-LAN

Anhang / Appendix B
Technische Daten / Specification

Formate / Formats		
DVD-Player	CD, CD-R, CD/RW, MP3, DVD-Video, DVD-R, DVD-RW, DVD+R, DVD+RW, VCD, S-VCD, JPEG Picture CD	
Videoausgang / Video output	YUV (Component), Composite (FBAS)	
Streaming Client	MP3, WMA, AAC, FLAC, OGG-Vorbis, LPCM, WAV	
Medienserver / Media server	UPnP AV, Media Player 10 (WMDRM10), vTuner Internet Radio Service, DLNA compatible servers	
Schnittstellen / Interfaces	USB 2.0, iPod Audio/Video und Steuerung, LAN, W-LAN	USB 2.0, iPod Audio/Video with control, LAN, W-LAN
Radio	FM Radio 87,5 – 108 MHz, RDS-Stationsname, Radiotext	FM Radio 87,5 – 108 MHz, RDS station name, Radiotext
Verstärkerteil		
Eingänge / Inputs	2 x Aux, 2 V / 20 kΩ	
Kopfhörerausgang / Headphone output	für dynamische Kopfhörer > 30 Ω	for dynamic headphones > 30 Ω
Bassbereich / Bass	1 x 50 W Dauerleistung	1 x 50 W continuous output
Mittel-Hochton / Mid-range / treble	2 x 50 W Dauerleistung	2 x 50 W continuous output
Klirrfaktor / T.H.D.	< 0,02 %	
Soundmangement	DSP gesteuerte Klangcharakteristiken	DSP controlled sound fields
Ausgänge / Outputs	PRE OUT Cinch, SUB OUT Cinch, SC-Link	
Netzanschluss	Automatische Netzspannungsumschaltung, 100 – 120 V / 200 – 240 V, 50 – 60 Hz	Automatic mains voltage adaption 100 – 120 V / 200 – 240 V 50 – 60 Hz
Zubehör / Accessories	Systemfernbedienung F100, W-LAN Antenne, FM Antenne	F100 system remote control, W-Lan aerial, FM aerial
Features	regelbare Displayhelligkeit, Zwei-Zeiten-Wecktimer	variable screen brightness, two-time alarm
optionales Zubehör / optional accessory	Fernbedienung FM100	FM100 remote control

Technisch begründete Änderungen vorbehalten. / We reserve the right to alter specifications.

T+A elektroakustik GmbH & Co. KG

Herford

Deutschland * Germany